

# MACWORLD

July 1985 \$3.95

Canada \$4.95

*The Macintosh Magazine*

## Mac Freedom

*How the Macintosh  
Increases Your  
Power to Publish*

.....  
**Programs for Writers**

.....  
**Using MacDraw for  
Page Makeup and Design**

.....  
**Top 10 Business  
Software**



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Come see Macbottom during the Boston  
MACWORLD Expo at booths 326 and 328.

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# MACWORLD

July 1985

The Macintosh™ Magazine

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Jeremy Joan Hewes

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### 84 The Mac Goes Pro Forma

Bill Grout

By enabling you to design, complete, and print forms, Megahaus's *MegaForm* can smooth out your paperwork, although you might find a few wrinkles.

### 94 Mr. CW in ChipWit Caves

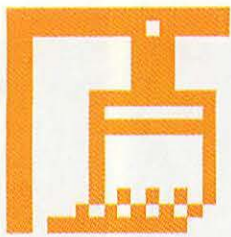
Sharon Zardetto Aker

Programming a robot? Educational software from Brainpower makes a game of it.

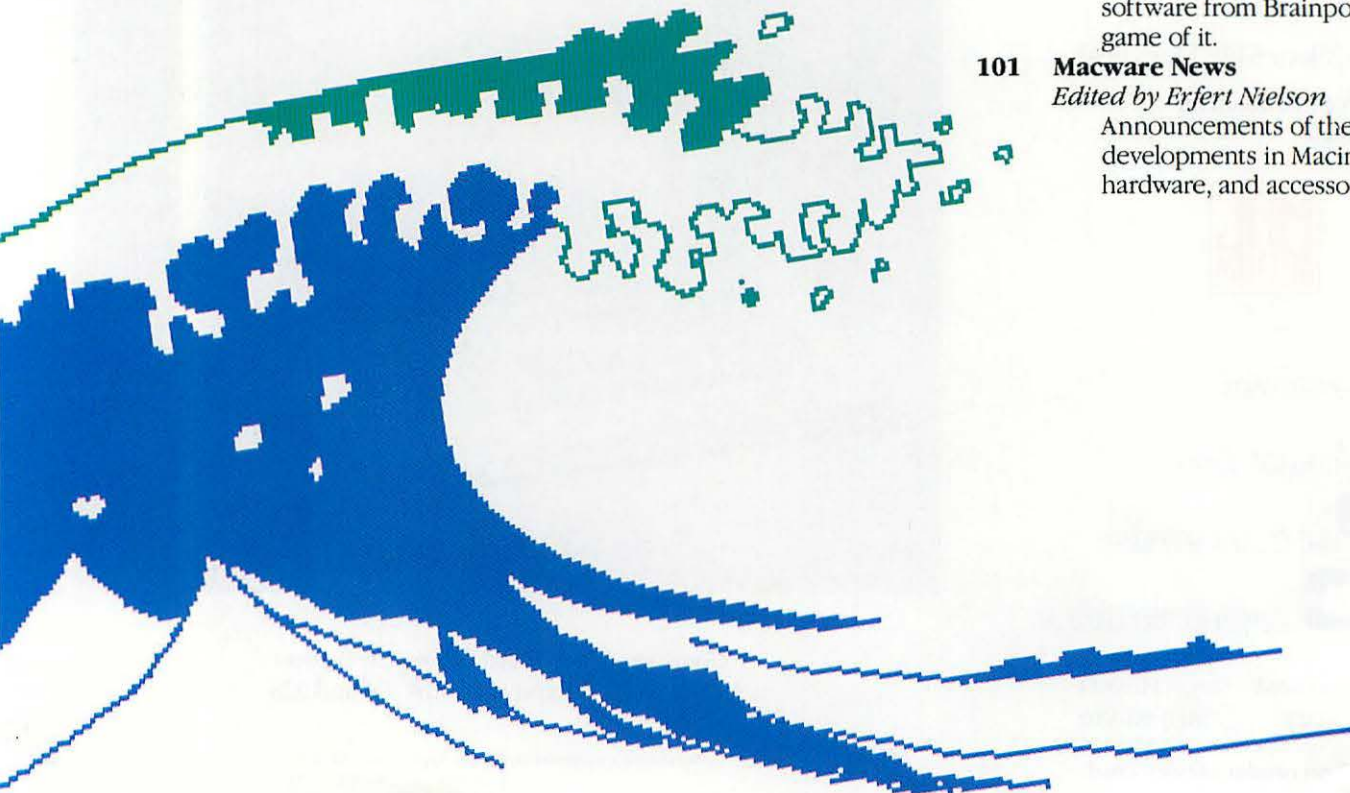
### 101 Macware News

Edited by Erfert Nielson

Announcements of the latest developments in Macintosh software, hardware, and accessories.



Layout artists can say good-bye to sticky fingers with the page-makeup programs reviewed beginning on page 70.





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*Gordon McComb*

Mac private eye Nick Lazlo uses *MacDraw* for electronic page makeup and lives to tell the tale.

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*Gordon McComb*

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### 141 Open Window

*Edited by Jim Heid*

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*Jeffrey S. Young*

Between the best of times and the worst of times, the Macintosh has become the avant-garde of French computing but seems bogged down in Britain. A report from both sides of the English Channel tells why.

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*Edited by Erfert Nielson*

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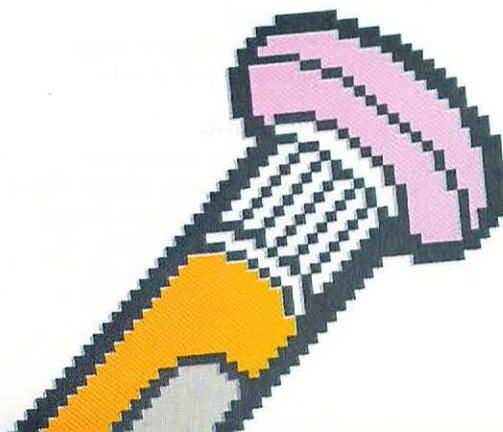
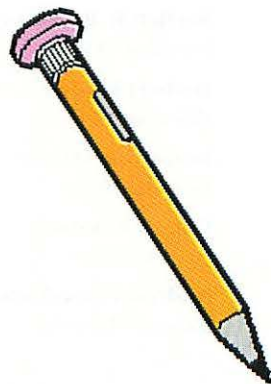
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*Like any craft, writing demands certain tools for certain tasks. Starting on page 46, read about programs that help you hammer out reports, novels, or even the Great American Computer Magazine Article.*





# MACWORLD

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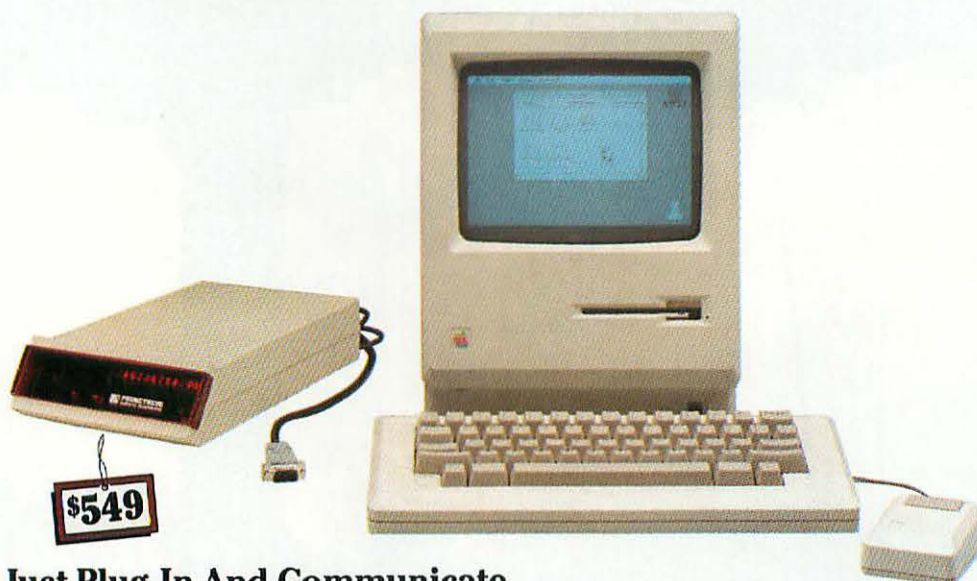
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# The Macintosh... **HOT-LINE**

## The Expandable Macintosh Modem With Software And Cable

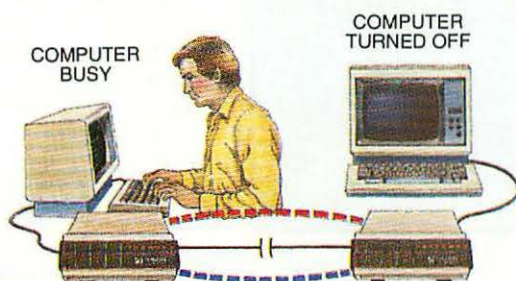


### Just Plug-In And Communicate

If you're a Macintosh user, you need our expandable 1200/300 baud intelligent modem. Supplied with our ProCom-M communications software and "Mac-to-modem" cable, ProModem 1200M is so simple to use that you'll instantly be on-line and communicating. It's Hayes compatible, and the price is right, too. Just \$549 complete.

### Electronic Mail A Reality

ProModem 1200M gives you something that's not available on any other modem in this price range. Our \$99 Communications Buffer and Alphanumeric Display options provide you with a sophisticated electronic mail network.



Amazing but true, your ProModem 1200M answers the phone, collects messages up to 50 pages long, sends out electronic mail, and displays all messages sent or received even though you are gone and MAC is busy or turned off. Thanks to ProModem 1200M, expensive hard-to-use communications software is not needed. The communications is in the modem, and electronic mail becomes a background function, where it belongs.

### Communications Software

Our ProCom-M communications software is designed specifically for Macintosh. It's simple to use, and maintains all Macintosh user interfaces such as icons, pull down menus, full windowing, dialog boxes and mouse control of all commands. You can initiate complex dialing sequences with two clicks of the mouse. ProCom-M includes X-modem protocol for error-free communications with any personal computer. This powerful software does a lot, but is so simple that most users will hardly have to refer to the manual.



*The Hot Line*

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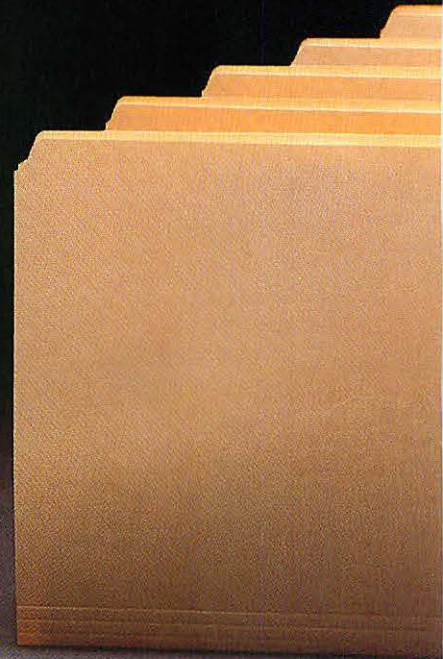
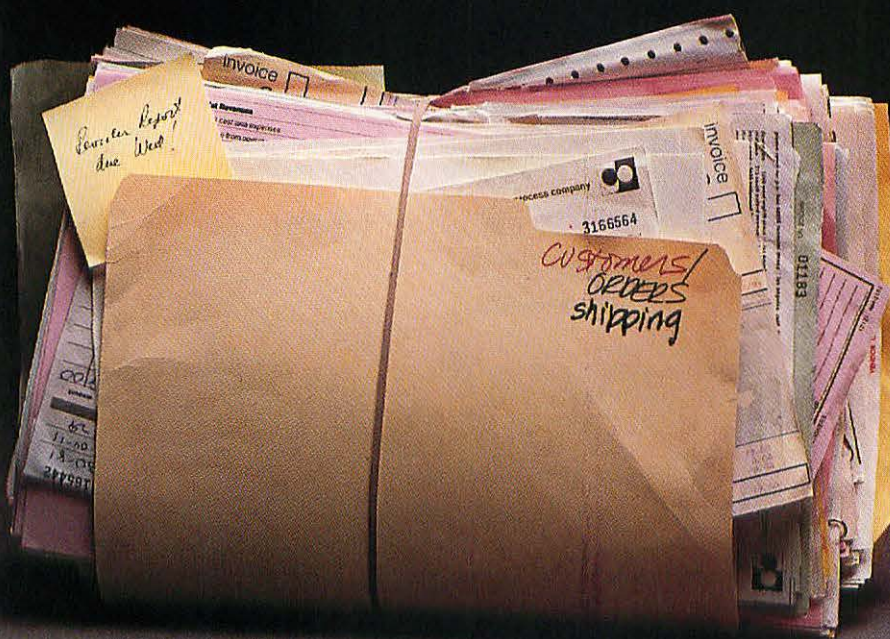
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# Which is the better way to



Any growing business needs to organize, analyze and use data.

Customer orders. Shipping records. Inventory. Billing. Prospect lists.

Now, depending on your Macintosh software, you can manage data one of two ways.

The simple, stuff-everything-into-one-file theory of data management.

That's how ordinary filers and information managers work.

You jam data into a single file that includes every piece of information you might ever want to know.

3	1	POMER ACRES	10	5	505	PATCH KIT	400	26.7	131
4	2	TON BURKE	5	5	501	NOT FELLY	80.3	65.3	77
5	2	TON BURKE	5	5	502	ACRYLIC	27.0	22.6	322
6	2	TON BURKE	5	5	505	PATCH KIT	21.1	33.3	335
7	2	TON BURKE	5	5	504	HEADSPACE	7.0	8.5	125
8	2	TON BURKE	5	5	505	PASTE	11.1	6.0	5
9	3	CHARLIE CARR	11	5	501	NOT FELLY	66.3	54.3	77

With an ordinary data manager, you have to re-enter existing information every time you enter new information. Pretty inefficient.

ENTER SALES									
SALESREP'S SALES STATISTICS									
SALESREP NO: 2									
NAME: TON BURKE									
AREA: 3									
LINE: 5									
PRICE	PRODUCT	JAN	FEB	MAR	APR	MAY	JUNE	JULY	TOTAL
501	NOT FELLY	80.3	65.3	77.7	59.5	66.0	43.8	155.0	
502	ACRYLIC	27.0	22.6	22.4	53.2	22.2	47.9	205.2	
503	PATCH KIT	21.1	33.3	33.5	19.7	21.4	58.0	187.0	
504	HEADSPACE	7.0	8.5	12.3	9.9	10.5	13.0	61.2	
505	PASTE	11.1	6.0	5.3	0.0	0.0	0.0	23.2	
		154.5	136.5	161.2	142.3	120.1	162.0	677.2	

With MacLion, you only have to enter the new data that has changed. Not only that, you can design your own data entry screens. Now, which is the most efficient way to manage your business data?

The problem?

Well, if you have a sales order entry file, every time you enter new data about a customer's order, you also have to re-enter all the existing data about your customer.

Repeat, repeat, repeat.

Worse, if you ever want to move the data from your sales order entry file to develop a new file, without having to rework it all over again, there's one small problem.

You can't.

Okay. Let's get serious.

MacLion™, on the other hand, is a true relational database management system.

## MacLion™. Serious database power for serious



# manage your data?



entirely new applications for your existing database just by adding new relations.

That's the most efficient way to manage your data.

For a MacLion demonstration, see your dealer. Or, send for our "Serious Buyer's Guide to Database Management Systems," which includes a demonstration disk



## Simple vs. serious.

And MacLion gives you some other remarkable features, too.

You can design and generate your own custom data entry screens and reports. Just by clicking your mouse through Macintosh pull-down menus—without programming.

Or, if you're a programmer at heart, you can also use MacLion's built-in procedural language and add even more specialized functions.

That's serious database power, only possible with MacLion.

plus complete information on what a database management system can do for your business.

Get serious—with MacLion.



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So instead of trying to jam all your business data into one massive file, you can set up several smaller, more manageable "relations." (Picture them as a series of neat file folders.)

The advantage?

In a sales order entry system, one relation contains biographical data about your customers that doesn't change. Another has their order data that does.

There's no duplication.

So when it's time to update customer orders, you only have to enter in new data. Not re-enter what already exists. And you can develop

### I'm serious about managing my data.

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## Macintosh users.

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- *Paradise's MAC 10,<sup>™</sup>*
- *the 10mb hard disk*
- *subsystem designed*
- *for the MAC.*

Your Mac's been  
lonely too long.



*R. Choudhury*  
*August 1st*

You just found the right hard-disk subsystem for your MAC... Check out the Paradise MAC 10.

**Easy To Look At:** Beauty isn't everything but most hard disk MAC drives will scare your computer to death in the morning! The MAC 10 is artfully engineered to complement the aesthetics of the MAC.

**Nice To Have Around:** Just 3.5" wide and no deeper than the MAC, the MAC 10 has a smaller footprint than any other external MAC hard drive subsystem. Nice to carry around too... Only 5 pounds.

**The Right Breeding:** Paradise Systems is known for innovative engineering. The MAC 10 is the latest in a line of ground breaking micro computer peripheral products from Paradise.

**Accommodating:** 10 MB of formatted data storage, there when you need it. Equal to 30 MAC floppy drives! Storage you'll want for *Jazz* and other popular business applications.

**Your MAC Can Relate To It:** 5 times faster than the add-on MAC floppy.

**So Can You:** Just plug in the MAC 10 and you're ready to go... That's it!

**No Surprises:** The MAC 10 won't void your *Apple* warranty, or require you to modify your system. The user interface uses pull down menus, just like the one you're used to on the MAC.

**Long Term Commitment:** The MAC 10 comes with a 1 year limited warranty\*.



**Do Your MAC A Favor:** Go see your Apple dealer and look at a MAC 10 or call us toll free at (800) 822-2020 (CA.) or (800) 527-7977 (outside CA.). It will be the beginning of a wonderful relationship.

### Specifications:

#### CAPACITY:

12.75 mb unformatted  
 10mb formatted

#### DISK DRIVE SEEK TIMES:

Adjacent track .....	18 ms
Average .....	85 ms
Maximum .....	180 ms

#### ROTATIONAL SPEED:

3600 RPM

#### POWER REQUIREMENTS:

110/220 Volts AC, 50/60hz,  
 50 watts max.

#### DIMENSIONS:

Height .....	5.5 inches
Width .....	3.5 inches
Depth .....	10.8 inches

#### WEIGHT:

Approx. 5 lbs.

#### INTERFACE:

Connects to your MAC via the modem or printer port. Printer connector and integral print spooler provided on MAC-10.

\*See retailer for details.

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Suggested Retail Price

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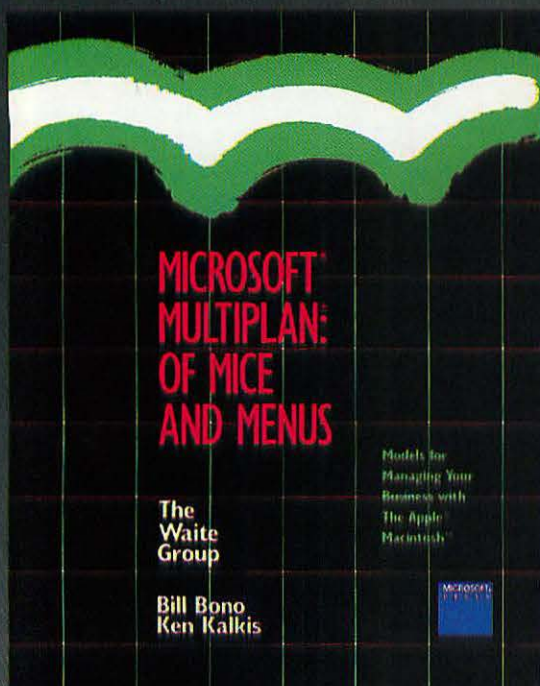
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# Play All Night

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Of Mice and Menus*

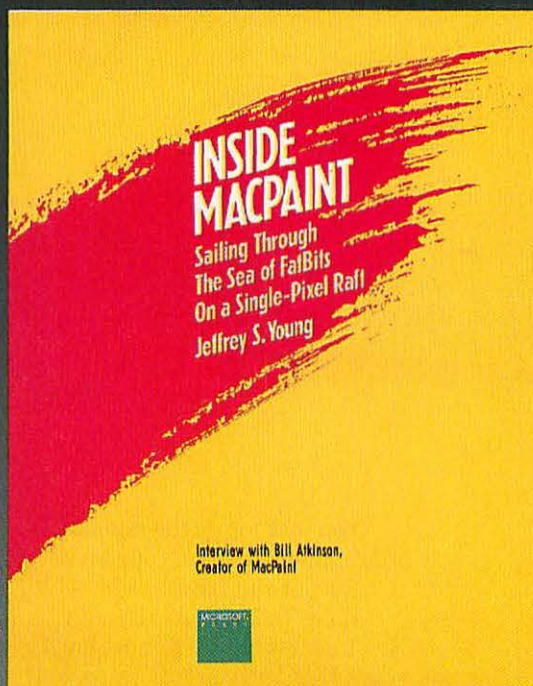


*The Waite Group, Bill Bono, and Ken Kalkis*

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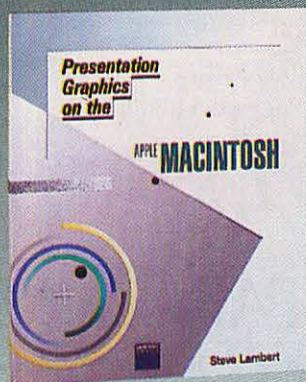
*Inside MacPaint*



*Jeffrey S. Young*

An extravaganza of words and images! Delve into every corner of the phenomenal MacPaint program and discover tips, features, and shortcuts not included in the documentation. Plus a rare, wide-ranging interview with Bill Atkinson, creator of MacPaint.

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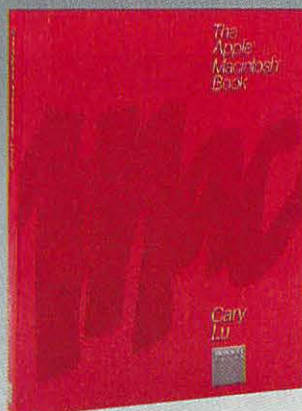


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Apple Macintosh**

*Steve Lambert*

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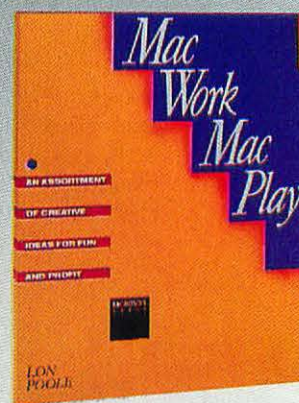


**The Apple Macintosh Book**

*Cary Lu*

The proven classic! Here's an authoritative, insider's guide to how the Mac and its software work.

**\$18.95**



**MacWork MacPlay**

*Lon Poole*

This collection of over 20 original ideas—integrating MacWrite, MacPaint, and Microsoft Multiplan—will provide a springboard for your imagination.

**\$18.95**

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Like the Macintosh™ it was specifically designed for, MACCOUNTANT proves that simple doesn't mean simple minded. It's a ferocious number cruncher that's been civilized so MACCOUNTANT works for you, not against you.

From its 5 journals and 11 reports to its full Windowing, Scrolling, Check Writing, Report Printing, Auto Correction and more;

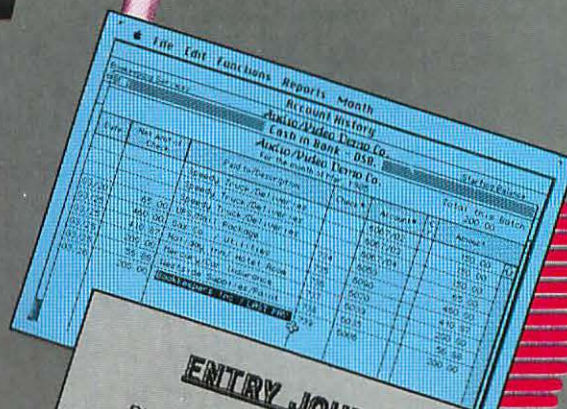
MACCOUNTANT is perhaps the most feature packed program available. Plus, Accounts Payable and Receivable are fully integrated at no additional cost.

Consider all of these features integrated in a program that's fast, intelligent, and intuitive.

No complex operating commands to master, MACCOUNTANT was designed to work the way you work;

*And, That's Smart.*

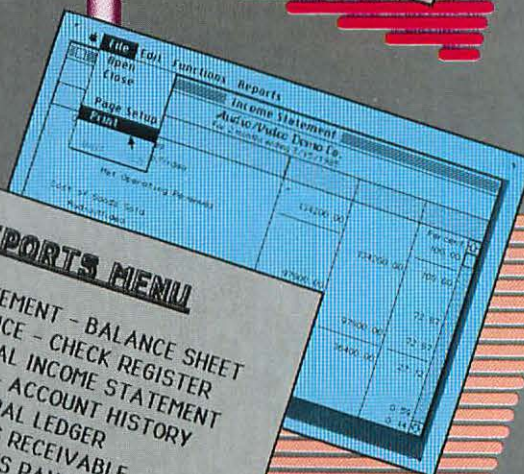
digital, etc. ■



The screenshot displays a window titled "Account History" for "Cash in Bank - DSR, Co." for the month of May. It features a menu bar with "File", "Edit", "Functions", and "Reports". The main area is a table with columns for "Date", "Net Amt", "Check", "Pay Description", "Check #", "Account", "Total", "Date", and "Balance". The table contains several rows of transaction data.

### ENTRY JOURNALS

PURCHASES / ACCOUNTS PAYABLE  
SALES / ACCOUNTS RECEIVABLE  
CASH IN BANK / DISBURSEMENTS  
CASH IN BANK / RECEIPTS  
NON CASH JOURNAL



The screenshot shows a window titled "Reports" for "Income Statement" for "DSR, Co." for the month of May. It has a menu bar with "File", "Edit", "Functions", and "Reports". The main area is a table with columns for "Date", "Net Amt", "Check", "Pay Description", "Check #", "Account", "Total", "Date", and "Balance". The table contains several rows of transaction data.

### REPORTS MENU

INCOME STATEMENT - BALANCE SHEET  
TRIAL BALANCE - CHECK REGISTER  
DEPARTMENTAL INCOME STATEMENT  
DAILY CASH - ACCOUNT HISTORY  
GENERAL LEDGER  
ACCOUNTS RECEIVABLE  
ACCOUNTS PAYABLE  
FINANCIAL RATIOS

So join the thousands who have made the intelligent choice.

It's Simple!

Just call a dealer of intelligent software in your area or dial (213) 452-5636 and get MACCOUNTANT on your staff at a special introductory price\* of \$195.00.

\*MACCOUNTANT suggested retail price is \$275.00. Introductory savings good through June 30, 1985.

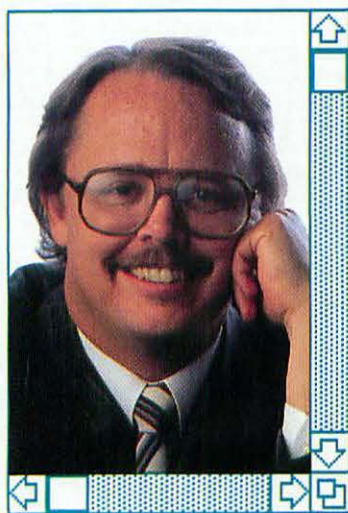
# MACCOUNTANT™

Circle 190 on reader service card



# Breaking the 512K Barrier

*A look at the memories that the future has in store*



If it hasn't happened to you yet, sooner or later you will ram up against the Mac's 512K barrier. And invariably you will wish your Macintosh had more memory.

Wouldn't it be great if the Mac had 4 megabytes of RAM—well within the amount its 68000 processor is capable of addressing? Going from 512K to 4 megabytes on a Macintosh would be like trading in a Volkswagen for a Ferrari.

And using the Switcher program developed by "Mac Wiz" Andy Hertzfeld with a multi-megabyte Mac would be fantastic. Dreams of infinite chains of programs and documents dance in my head.



As memory capacity increases exponentially, it becomes proportionally less expensive. While complaining about paying \$1000 for 512K, we quickly forget that only a few years ago the same amount of money purchased only 16K—and the maximum any computer could hold was a meager 64K.

It's too bad Apple didn't provide a way to expand the Mac's memory except by upgrading the entire digital board. Is an optional memory expansion box too much to ask for?

Lotus Development, in tandem with Intel, recently announced a memory board for the IBM PC called Above Board. Using a technique called bank-switching, the product can expand the PC's memory to 4 megabytes.

If a similar board were developed for the Mac, it could address more than 60 megabytes of RAM.

As a Mac owner you are stuck waiting for bigger memory chips to replace the 256K chips in your 512K system. Or you are holding on to the edge of your chair until Apple introduces a new Mac fatter than the Fat Mac.



While wishing for more internal memory lingers, I have to admit that increased external memory is also high on my list of Mac needs.

The whole notion of computing takes a quantum leap when you discover that information can be stored in one place rather than scattered over hundreds of little disks. Average users can store all their pro-

grams as well as a year's worth of files on a 10-megabyte hard disk—and theoretically never have to look at a floppy again.

The only factor preventing hard disks from becoming standard equipment on personal computers is the cost. However, that is quickly changing. By the end of 1986, you should be able to buy a 10-megabyte hard disk for around \$500.



If hard disk drives don't become standard, it will be only because optical disks make it to the finish line first.

Optical disks use laser technology to store information. The first, introduced by Sony, is a read-only device called CD ROM (Compact Disk Read-Only Memory). Some optical disks, which are about the size of floppy disks, have a data storage capacity of about 550 megabytes. Although you cannot write or erase information on CD ROM disks, they add a new dimension to personal computers because they make it possible to combine digital, video, and audio information for the first time.



# WITH MEGAHAUS, YOU CAN TURN YOUR MACINTOSH INTO

# SUPER MAC.

## NOW! NEW, SUPER SOFTWARE FOR THE MACINTOSH!

[zoom] It's a bird! It's a plane! No... it's four super new programs from Megahaus Corp. Each one complements the other to make your Macintosh into a super machine by forming a powerful, integrated system!

### MegaMerge

MegaMerge is THE mail merge program for MacWrite! With MegaMerge, you can use MacWrite to create form letters, print mailing labels and more! You can even overcome MacWrite's limited document size by "stitching" several documents together and printing them as one, long document!

### MegaFiler

If you do any filing at all in your home or office, you NEED MegaFiler!

It's the file management system for the Macintosh that lets you file and retrieve information with EASE!

You can store names, addresses or other information, using MegaFiler's library of ready-made files for:

- Mailing Lists
- Customer Orders and Invoices

- Home Management
- Business Inventory
- Customer Files
- And MUCH more!

You can also design your own files using MegaFiler's fun-to-use design files! You can also print lists, tables, mailing labels and MegaMerge mailing lists. You can even incorporate them into MacWrite and other Macintosh applications!

Here's what else MegaFiler can do:

- Sort information on any field
- Find forms based on any criteria you choose. For example, find all the people who live in California whose names begin with "B" and own a Macintosh and print them in zip code order.
- You can manage several files at one time.
- You can cut information from one file and "paste" it into another.

MegaFiler is truly the file management system you've been waiting for. Use over how super it really is!

### MegaForm

MegaForm is an easy-to-use forms and reports generator. You can use MegaForm to create actual-size forms and reports such as:

- Invoice Forms
- Order Forms
- Purchase Orders
- Expense Reports
- And MUCH more!

With MegaForm you can draw forms and reports exactly the way you want them to appear. It will also help you fill out the form you just created, using MegaFiler. With MegaForm you can also draw, file, calculate and even sequentially number your forms!

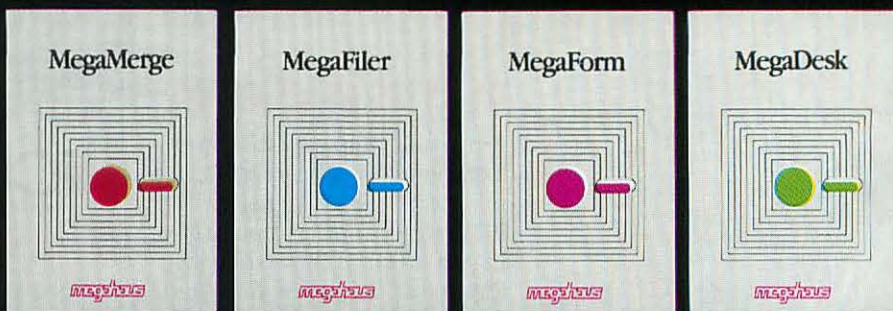
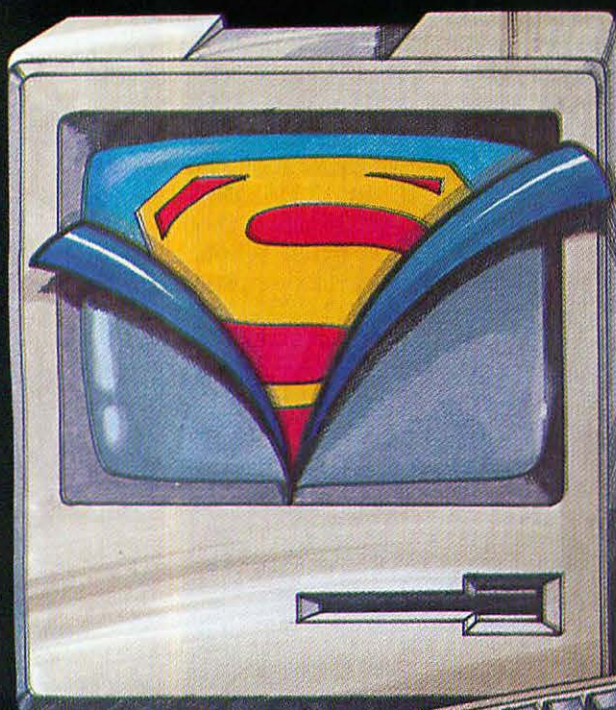
### MegaDesk

MegaDesk is something almost all of us can use. With MegaDesk, you get three desktop accessories, in other words, a program that you can run at the same time as other programs.

With MegaDesk you'll get: • A Desktop "Appointment book" which is a calendar that shows you month, day and date. Every day has it's own page on which you can put down information. • A "Quicklook" accessory which gives you a brief look into any MegaFiler file on your desk. • A Reference Card accessory which allows you to flip up a "window" containing any information you choose. We supply a complete library of reference cards and you can also add your own!

The Megahaus family of software products truly does make your computer work harder and easier. They can also turn a mild-mannered Macintosh into "super Mac" faster than a spreading bulletin.

**The Megahaus family  
of Software will turn your  
Macintosh into a "Super Mac!"**



**megahaus**  
WE MAKE COMPUTERS WORK HARDER.  
*Easier.*

Megahaus Corp.  
5703 Oberlin Dr.  
San Diego, CA 92121  
Call (619) 450-1230

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# The most BASIC.

Microsoft® BASIC is the language spoken by nine out of ten microcomputers worldwide. It's the language with the most programs written for it.

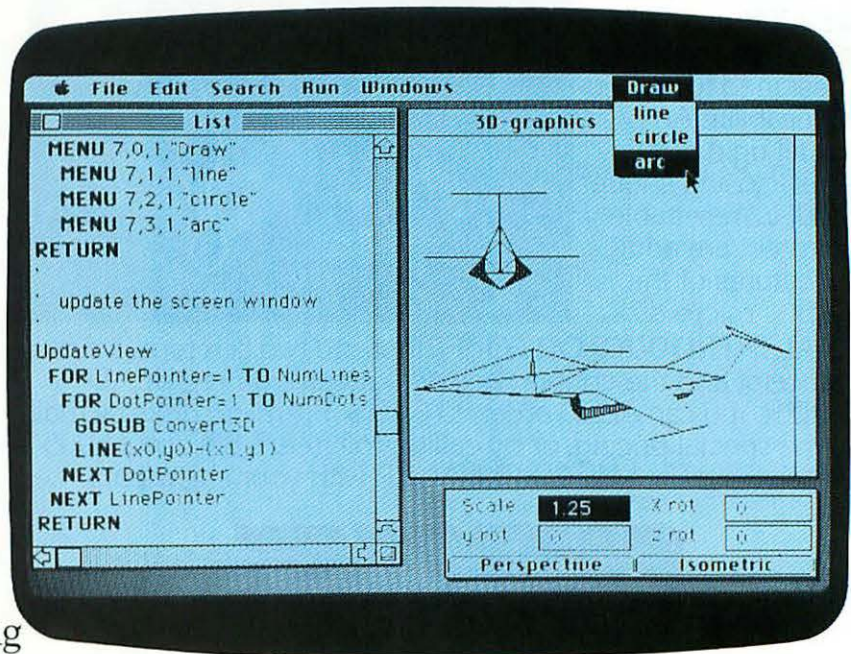
So if you want to access the power of your Macintosh™, only one language makes the most sense. Mac's first language, Microsoft BASIC.

Not only is it the industry standard, it's the most advanced BASIC for Macintosh. It lets you add mouse commands. Graphics. Windows. Change type fonts and styles. Customize menus. Incorporate music and sound effects. Write your own dialog boxes. Basically, it lets you take advantage of everything that makes Mac 'Mac.'

It makes editing programs as easy as cutting and pasting and pointing and clicking. Debugging is easier

than ever with the advanced trace command.

It's no wonder Microsoft is the most logical choice for the Macintosh.



**MICROSOFT** We've The High Performance Software written more Macintosh programs than any other software company. Including Mac's spreadsheet, Multiplan®.

So if you want to get the most out of your Macintosh, call (800) 426-9400 for the name of your nearest Microsoft dealer. In Washington State, Alaska, Hawaii and Canada, call (206) 828-8088.

Microsoft and Multiplan are registered trademarks of Microsoft Corporation. Macintosh is a trademark licensed to Apple Computer, Inc.

**MICRO  
SOFT**



ACT NOW!  
\$9.95 VALUE

# FREE OPUS DISKETTE HEAD CLEANER

With Purchase of OPUS "Unfloppable" Floppies

Good memories from OPUS: Purchase 20 OPUS 3½" micro disks and receive a Free UNIVERSAL HEAD CLEANER for your Macintosh, a \$9.95 value. As an added value your 3½" diskettes will be packaged in a handy plastic Flip-n-file Storage case.

The new OPUS 3½" micro disks are 100% tested, 100% certified error-free, Sony licensed and designed for exceptional reliability. An individual rigid plastic case, self-closing shutter, and built-in, resettable write-protect are additional features of the OPUS 3½" micro disk.



**SPECIAL INTRODUCTORY OFFER:** Send two box tops, a dated sales receipt and the coupon below to receive a Free HEAD CLEANER. You can ALSO order 20 OPUS 3½" micro disks by mail, using the special pricing, or by calling toll free: 1-800/692-6905 and receive the Free HEAD CLEANER with your shipment.

## OPUS

NO BAD MEMORIES

SEND TO: OPUS Computer Products  
3½" HEAD CLEANER OFFER  
150 Chicago Street  
Cary, IL 60013

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone ( ) \_\_\_\_\_

☐ Proof of Purchase Enclosed or SHIP ME \_\_\_\_\_ Boxes of OPUS 3½" Diskettes

CHECK ONE: ☐ \$35.90 Single-Side 10-pack ☐ \$42.90 Dual-Side 10-pack

Add \$1.50 for shipping & handling (Illinois residents add 6% sales tax.)

TOTAL ENCLOSED: \$ \_\_\_\_\_ (Check or Money Order Only)

Charge to my: ☐ VISA ☐ MasterCard

Account Number:

Expiration Date:

Signature: \_\_\_\_\_

OFFER EXPIRES - FEBRUARY 28, 1986

Circle 279 on reader service card

David Bunnell

Someday, as you look up birds in your encyclopedia, you will be able to browse through video clips that not only show your favorite species in flight—but also let you hear it sing.

Within a year optical drives should be available that will permit computers to "write once" to a compact disk. This may seem a crippling limitation for a mass storage device, but with several hundred megabytes on a removable disk it won't make much difference. You simply store every version of a file and archive its creation. Later in the decade affordable read/write optical drives will become available.

After optical mass storage has been introduced to personal computers, the next step will be the development of organic memory chips. These self-reproducing components will be about the size of the period at the end of this sentence. Each one will hold at least 1 megabyte of data.

As memory storage devices continue to grow in capacity and shrink in size, someday individuals will have their own complete database containing information gathered from birth.

You'll never have to worry about losing a phone number—even if you entered it years ago, it will be only a click away. And comprehensive medical and educational records will always be at your fingertips.

At death our life history databases will be filed in the equivalent of the Library of Congress—on one small chip. What happens to this information will probably become a major issue among the masses.



It is thoughts like these that make me impatient with my Mac and its puny 512K of memory. □



# JUST ARRIVED!

## The first complete desk management program for the Mac.

It's here! A powerful software program featuring dynamic storage/retrieval capabilities for your Mac. It's called THE DESK ORGANIZER®. And it's ready to help you organize yourself, your work, you name it.

At the core of THE DESK ORGANIZER is a *free-form filing system* that files anything you want, just by typing it. Notes. Letters. Reports. Phone numbers. Names and addresses. And you can retrieve or update at any time.

Surrounding this system are easy-to-use tools that add a new dimension to your Mac:

THE DESK ORGANIZER's *extensive correspondence facility* replaces Mac's limited notepad. Its *calculator* adds an electronic paper tape—and a powerful formula calculator (the Mac has neither). And THE DESK ORGANIZER offers *unlimited alarms* that chime gently to remind you of meetings. Plus a *telephone dialer* that automatically searches files, locates the proper number and connects you.

What's more, THE DESK ORGANIZER increases the filing capacity of the Mac—by storing hundreds of Mac notes and letters on a single diskette.

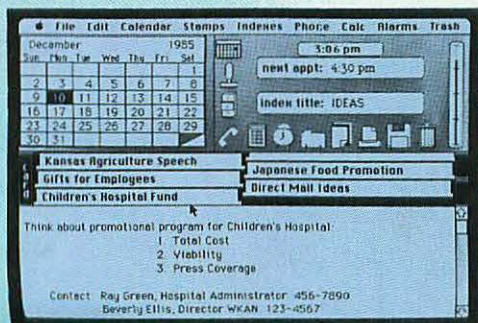
Born to run on the Mac, THE DESK ORGANIZER can *co-reside with other Mac programs*—to keep you completely organized no matter what you're working on.

To get this infallible electronic secretary for **only \$99**, see your Mac software dealer.

**OR CALL WARNER SOFTWARE (212) 484-3070.**



Warner Software, Inc., 666 Fifth Ave., New York, NY 10103  
A Warner Communications Company

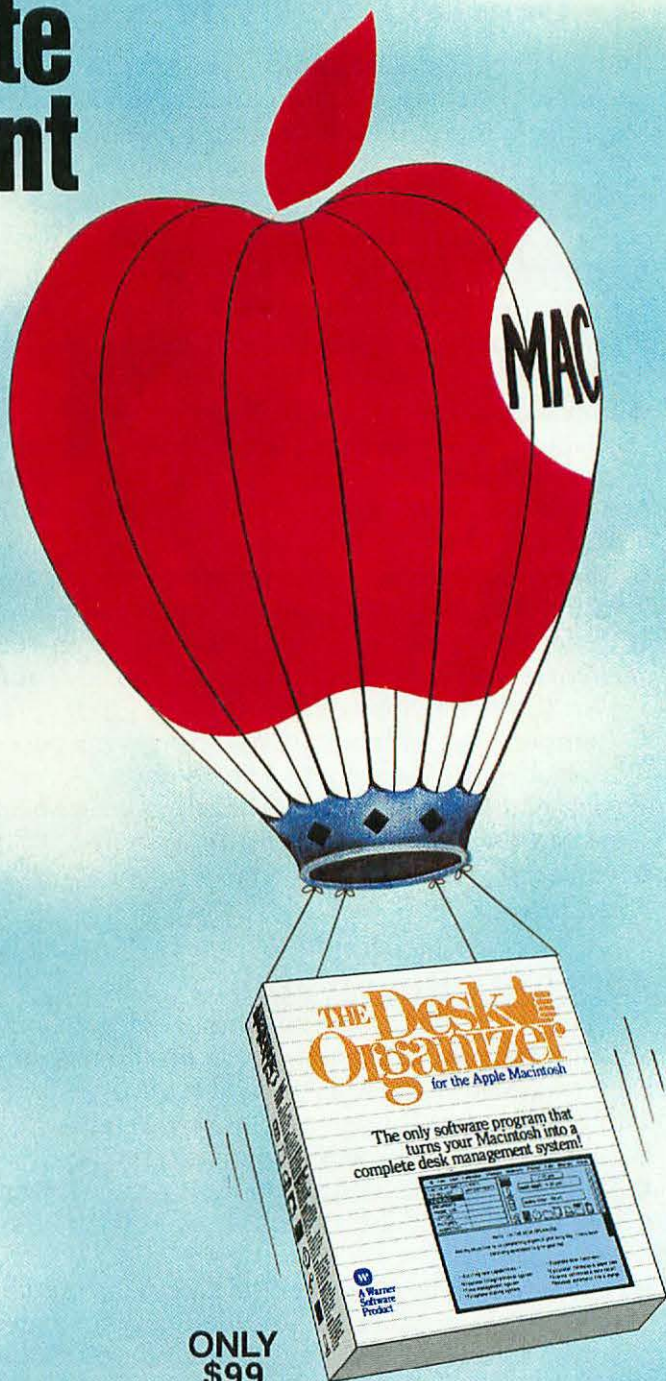


**INCLUDED FREE:** 25 business form letters and a library of useful formulas. Runs on 128K and 512K Macs.

### Truly a major software breakthrough!

Macintosh® is a registered trademark of Apple Computer, Inc. The Desk Organizer® is a registered trademark of Conceptual Instruments Company.

Circle 183 on reader service card





# Meet The New Financiers...

## General Ledger, Accounts Receivable, and Inventory Control\*

The Palantir Financial Series -- the first true accounting system to run on a 128K single-disk Macintosh. If you have a small to moderate-sized business, you'll find what you're looking for right here.

### General Ledger

Here's a true accounting system -- so much more than just a cash book or expense filer. Look at what it offers:

- Flexible chart of accounts. Up to 9,999 different accounts. Cash, expense, income, etc... in any combination.
- Full double entry system. You cannot go out of balance.
- Six financial statement formats to choose from. You'll find one suited just for your business.
- Up to 12 accounting periods. And even after you rollover to a new period, you can still go back and post to the previous one.
- Comparisons with budget and prior year performance. By period and year-to-date.
- Multiplan™ transfer. Extract data for spreadsheet programs and other forecasting systems.
- 400 accounts on one 400K disc.

Retail price: \$145

### Accounts Receivable

Keep track of who owes you what from how long ago. Print reports or display them on the screen. Either way you've got solid control of your business with features like these:

- Up to 9,999 customers.
- Full three-period aging. You define the periods.
- Open-item or balance-forward accounts or both. Your choice.
- Sales analysis by customer, salesperson, branch, type of sale, product, or just about anything else you can think up. 999 ways to analyze your sales for the period and year-to-date. Pinpoint your problems and your opportunities.
- Compatible output to the Financial Series General Ledger. Analyze profits as well as sales.
- 300 accounts on one 400K disk.

Retail price: \$145

### Inventory Control

The perfect system for your retail or wholesale business.

- Handles all these transactions: purchase orders, receipts, transfers, adjustments, issues and returns.
- Provides complete audit trails.

- Tracks stock by units and dollars: How many dollars you have on order. The dollar value of your inventory, sale prices, and profit margins.
- Controls stock levels. Reorder Report shows quantities below your specified minimums.
- Analyzes your inventory as well as providing cost and sales histories and gross profit margins. Also, product status by type and location is given.
- Keeps salespeople up-to-date. Price list shows quantity on hand, selling price, sales tax, and current average cost.
- 1,000 products and 400 purchase orders on one 400K disk.

Retail price: \$145

The new Financial Series from Palantir does more than just help you run your business. It helps you manage it, for growth and profitability.

Available from your dealer.

Palantir Software, 12777  
Jones Road, Suite 100,  
Houston, Texas 77070. Call (713)  
955-8880, or (800) 831-3119 (Texas),  
(800) 368-3797 (National), or (800)  
235-0025 (Canada). Circle 74 on reader service card



PALANTIR  
SOFTWARE

\*Requires Microsoft® Basic



# SUDDENLY THERE'S NEON.™

## IT PUTS PROGRAMMING IN A WHOLE NEW LIGHT.

Hidden within your Mac is the programming power, flexibility, and speed to match your imagination. Neon is your key to this object-oriented world. Based on the same design philosophy as the Mac itself, Neon lets you create and command objects—program modules that you build, perfect, and add to your personal collection of tools. In this Smalltalk-like environment, you wield the power to quickly assemble and test ideas, tuning as you go for maximum speed and efficiency.

Neon is lean and works well in 128K. Dynamic overlays multiply this capacity for the fattest Mac you can use. Neon is easy to work with from the beginning, and quickly puts you at the leading edge of professional software development. With Neon, you're already in the software business because there are no licensing fees. Ever.

If you are about to program for the first time, you'll appreciate the comprehensive manual by Danny Goodman

that guides you through the commands and concepts. For the professional, Neon is the only choice.

Created by Kriya Systems, Inc. for the development of our Typing Tutor III™ keyboard instruction program, Neon is your answer to software artistry with the Mac.

Call 1-800-621-0660 now with Visa or MasterCard, or send your check to Kriya Systems, Inc. 505 N. Lake Shore Drive, Suite 5510, Chicago, IL 60611, (312) 822-0624, to order your copy of Neon. The price is \$299. As a special introductory offer, you may purchase Neon and full documentation through June 30, 1985 for \$155, including shipping and handling.





# Now data do look base.



The Spokesman

Price List  
Effective January, 1985

Item Number	Product Description	Price
AC 2345	Water Bottle	15.00
AB26L	Ladies 26" Breeze 10 Speed	179.00
AB200	Bicycle Built For Two	249.00
AB100		69.00
AB27M		
HT100		
FCA911		
FCA901		
5792		
5796		
5650		
BBS200		
BBA101		
BBA102		
27AW		
26AW		
SB 231		



The Spokesman  
12 Bearing Street Wheeling, W.VA 26055  
March 6, 1985

Jeremy Williamson, Jr.  
1456 East Raybourne Road  
Farmville VA 23944

Dear Jeremy:

Thank you for your recent order from the Spokesman Company. We are currently processing your order for immediate shipment. The following list represents the totals we have received in our shipping department.

2	27" alloy wheel	# 27AW	at	\$62.00	\$124.00
1	Seat Post	# 5792	at	\$22.78	\$22.78
4	Brake Shoes	# BBS200	at	\$3.00	\$12.00
2	Saddle Bags	# SB 231	at	\$38.00	\$76.00
Total Order:					\$234.78

I am confident  
products for you  
free number if  
modify the or  
telephone pri  
adequate not

Thank you  
again in the

Sincerely,

John L. S



The Spokesman

PURCHASE  
ORDER

To: Weinmann, USA  
88 Skid Row  
New York, NY, 01103

Description	Item Number	Units	Unit Price	Extended Price
Brake shoes	BBS200	2	\$0.50	\$1.00
Brake lever, right front tire	BBA101	1	\$5.45	\$5.45
Brake lever, left front	BBA102	2	\$5.45	\$10.90

Amount of Purchase order: \$17.35  
Sales Tax: \$1.12  
Total Amount of Purchase order: \$18.47



The Spokesman

STOCK BOOK

Description: Handlebar Tape  
Number: HT100  
Closing Stock: 10  
Current Inventory Date: March 31, 1985  
Understocked by: -2  
Comments: Available in brown, red, or black.  
Vendor: MiracleTape Inc.  
Address: 66 Tacky Drive, Stickyville, MA 01701

To: Acme Water Bottle Sales  
2389 E. Salem Drive  
Kiokuck, Iowa 23668

To: American Bicycle  
234 Main Street  
Philadelphia, PA 03456

To: MiracleTape Inc.



The Spokesman

Vendor	Description	Item Number	Closing Stock	Under Stock
Acme Water Bottle	Water Bottle	AC 2345	8	4
Totals for Acme Water Bottle Sales				
American Bicycle	Ladies 26" Breeze	AB26L	3	-1
American Bicycle	Bicycle Built For Two	AB200	4	8
American Bicycle	Solo Unicycle	AB100	5	1
American Bicycle	Mens 27" Blazer	AB27M	3	1
Totals for American Bicycle				
MiracleTape Inc.	Handlebar Tape	HT100	15	9
Totals for MiracleTape Inc.				
Miyaka Bicycle	Chrome forks for 27"	FCA911	2	1
Miyaka Bicycle	Red Flyer Bike	FCA901	4	1
Totals for Miyaka Bicycle				
			2	2
			5	1
			3	3
			3	3
			10	7
			49	20
Total Restock Cost			\$1,330.81	



# esn't have to

## Introducing FileMaker.

Because just *having* information isn't enough. You have to be able to do whatever you want with it. Arrange it. Rearrange it. Massage it.

Embellish it. Make it into something you can use. Easily.

FileMaker™ lets you not only store and organize your business information, but manipulate it in limitless ways, to create literally any kind of form or report you want.

First of all, FileMaker lets you change direction, any time, without redoing everything. It even lets you start out without a direction.

And in addition to doing all the meat-and-potatoes things a database is supposed to do—calculations, summary reports, sorting of all kinds—FileMaker does everything you bought your Macintosh™ for. Text editing. Graphics. Pull-down menus. Keyboard commands. Windows. Different fonts, styles and graphic design tools. Your information not only makes more sense, it makes an impression. Any kind you want.

With FileMaker, you can even design your own data entry forms, so

you can put information in any way you want, without arbitrary limitations. And of course, it does all the tricky little things automatically... like indexing every word, number and date for speed searches.

Because you design your output right on the screen, you can see exactly what you (and your customers) are going to get. And you can create any number of forms for your information to take.

So what might have been a dreary order acknowledgement can now be a clear, friendly letter. Or it can be a meaningful comparison of inventory by vendor. Or parts lists, receiving verifications, purchase orders, labels, name badges, rosters and hit lists.

With FileMaker, you can pick up from other programs, like MacWrite™, MacPaint™, MicroSoft Plan™, Jazz™ and share the applications you've created with other members of your team. You get all the tools you need to easily consolidate group efforts into one database.

And FileMaker takes full advantage of the Macintosh family, including the Macintosh XL™, Macintosh Office™ and LaserWriter™.

So for \$195 (suggested retail), things could look considerably better for your entire division, department,

professional practice, retail operation, club, organization, or principality.

Contact your Macintosh software dealer for a demonstration, or call 1 800 MACWARE to find out where you can get FileMaker in your area. From Forethought, Inc.



## MACWARE™



## INTERMISSION FOR THE SERIOUS VIEWER



**MouseStick**  
Break the routine. Give your serious side time off. All without leaving your desk. With MouseStick,™ from Video 7.™

**Mastery from the masters**  
MouseStick is the *original* joystick for the Macintosh.™ And it's from Video 7, masters of video enhancements for Apple™ computers.

**Friend, not foe**  
MouseStick works with any software on any size Macintosh. It's armed with a dual plug, so mouse and MouseStick take you from office to castle and back, without even flipping a switch.

**Escape with MouseStick**  
So get MouseStick for your Macintosh. And give your serious side a break. Mousestick. From Video 7. Call for the dealer nearest you: (800) 238-0101, in California, (408) 943-0101.

MouseStick includes a joystick and the MouseStick interface which is compatible with any Atari-type joystick. MouseStick is a trademark of Video 7 Inc. Apple is a registered trademark of Apple Computer Inc. Macintosh is a trademark licensed to Apple Computer Inc.

Circle 300 on reader service card





# Introducing the State of the Art of Persuasion.

PageMaker™ Desktop Publishing.

No matter what business you're in, you're in the publishing business. Because what you've got to say has to catch someone's eye before it gets read.

That's why we invented PageMaker.

PageMaker can give any document—proposals, presentations, price lists, newsletters and spec sheets—the eye-appeal and attention-getting clout of professionally designed and typeset publications. Without the time or expense.

So they get noticed.

And because PageMaker software works with Macintosh™, you know it's very easy to use.

Learn more about how PageMaker can turn your Macintosh into a low-cost, in-house publishing center that speaks up for you and your company. See your Macintosh dealer for details today. Or call (206) 467-8165.

PageMaker is a trademark of Aldus Corporation.



ALD

Architectural Design

Issue #12

Winter

## Arch News

The Society of Architects  
1400 New York Avenue  
Washington DC 20018

Value is what the 1985 SOA National Seminar in Atlanta is about — and it's what you'll find in greater quantity and greater quality than ever before at the convention's 1985 SOA Exhibit of New Technology and Products.

The biggest convention exhibit in SOA history will present you with a demanding challenge: Find a way to decide which products, services and technologies you want to learn more about.

Computer Technology  
Software, Hardware  
Contract Furniture  
Interiors, Exteriors  
Practice Systems

You'll find it all, plus a convention schedule that lets you see it all, at the 1985 SOA Display of New Products and Design.



The Art of Dormers:  
A retrospective look  
at 19th Century  
dormers at the  
Seattle Architectural  
Gallery through  
January 12.

"Architecture...  
has its own  
validity. It needs  
no reference to  
any other discipline  
to make it viable  
or to justify  
its value."  
—Philip Johnson



### Master Architect

The man featured in this month's issue may well be one of Vancouver's best kept secrets. You may not know his face, but if you live in Vancouver you know his work — that is, if you've ever visited Simon Fraser University, The Museum of Anthropology, or the Law Square/The Law Centre. A number of other government, commercial and residential buildings. The man is Arthur Erickson, Architect, and he has called Vancouver home for most of his life.

While the layperson may not recognize his face or name, during a remarkable and prolific career spanning more than 30 years, Arthur Erickson has received dozens of honorary degrees and virtually every major professional and personal award. To list them all would take pages, but they include the Man of the Year award, 1972; the Tau Sigma Gold Medal for excellence in Design,

"Architecture  
aims at eternity;  
and therefore is  
the only thing  
incapable of  
modes of fashions  
in its principles."  
—Christopher Wren



### Conferences, seminars, workshops:

May 21-25: 25th Annual Meeting,  
The Society of Architects, 1400 New  
York Avenue, Wash. DC 20006.

June 10: Deadline, call for 500-word  
abstracts, "Designing and Managing  
Commercial Buildings: An Intensive  
Workshop."

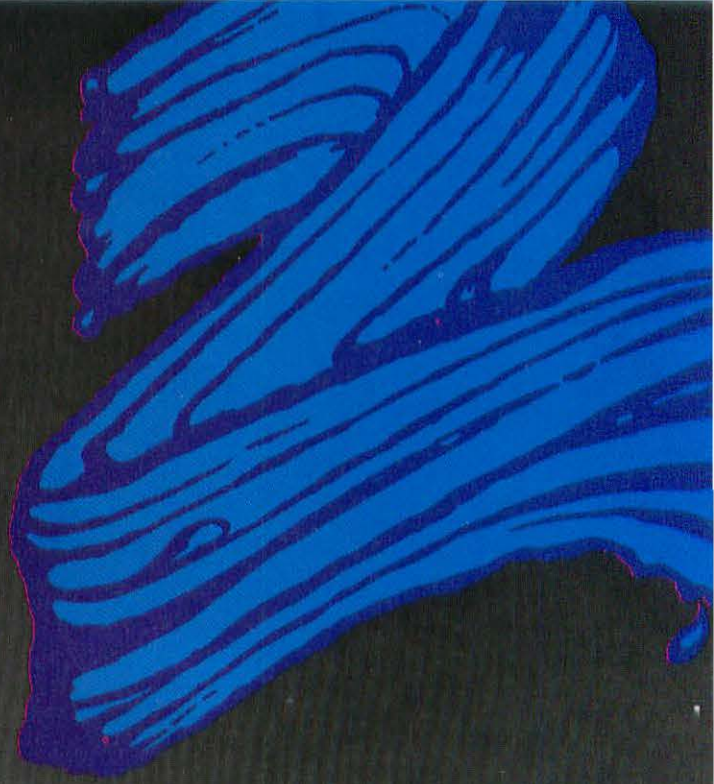
June 25: American International  
Solar Conference and Exhibition.  
Thomas Convention Center,  
Dallas, TX.

Call (206) 555-1919  
for details and  
register early for  
the 1985 SOA  
National Seminar,  
March 9-12, in  
Atlanta.

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PageMaker





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Time...Even If You Don't Type!**

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Price: \$49.95**

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**Circle 218 on reader service card**



# Letters

## Haunting Memory

I recently had my Mac upgraded to 512K by MassTech and am very pleased with both the quality of the workmanship and the service. I do, however, have some misgivings.

In the weeks since I had the upgrade done, I have twice read about an upcoming ROM upgrade from Apple. Having saved a few hundred bucks by not getting the Apple upgrade, I now fear that when the ROM upgrade comes, I'll have a digital board that will not be accepted as a trade-in.

Obviously, only Apple Computer will be able to offer the ROM upgrade. I cannot believe that Apple will accept boards that have been modified by another company in exchange for factory-built boards with the new ROM. On the other hand, if dealers will be able to replace the ROM in their own shops, I probably don't have anything to worry about.

Warren Michelsen  
Page, Arizona

## The Price of Piracy

The computer industry is going to have to do a better job of dealing with software piracy. Most of us have enjoyed the use of an unauthorized copy of a

program and won't think twice about doing so until the benefits and costs of piracy change. The friendliness of Macintosh software makes it rewarding to pirate because paper documentation is almost unnecessary. The practice of making unauthorized copies is so widespread that developers of the best software have no assurance of recapturing their investment. Developers who address the problem with copy protection only irritate users and don't really prevent piracy.

The only other solution is to put some teeth in the software copyright laws. A law with penalties of ten times damages and bounty of five times damages, with privacy protected, may be draconian, but it would be acceptable if it allowed us to get what we really want at a price we can afford.

If piracy is almost eliminated, the software industry needs to adjust its marketing strategy with a two-tiered pricing and licensing policy for business and personal users. The software industry makes money in the business sector, and most pirated software is for personal use. Most nonbusiness users can't justify paying the high prices that are profitable for developers. Together, a two-tiered policy and tough legislation would improve the income of developers and the productivity of users by protecting copyrights, opening up the

legal market, and making obstructive copy-protection schemes unnecessary.

Russell P. Davis  
Virginia Beach, Virginia

## Disks of No Return

Can you believe Microsoft's contest [*Macworld*, March 1985]? It only costs you a disk each time you enter. Microsoft could afford to return the disks and should, with copies of the winning programs. The contest appears to be a Microsoft scam to get free disks. Frankly, I'm embarrassed that a company like Microsoft would offer such paltry contest prizes. The total value of the non-Microsoft prizes is less than \$7000, retail. Hence, after a mere 1750 entries, the company is making money. Perhaps your disk will be put to good purpose after Microsoft erases the program on which you so patiently labored.

Gary Torgirson  
Seattle, Washington

## Room to Review

I received the March issue of *Macworld* and was once again disappointed by the small number of product reviews. I am upset particularly by the lack of coverage given to application programs because a

magazine such as yours is the only way I can get an objective evaluation.

Considering all the blank space in your magazine, I would think it would be easy to fit more reviews into the same number of pages. If something has to go, I for one could do without reviews of games, the philosophically oriented columns, and the articles about how people are using Macintoshes.

Robert L. Myers  
St. Paul, Minnesota

*Your point about the need for more product reviews is well taken. In fact, a new Macworld department dedicated to reviews begins next month.—Ed.*

## Most Likely to Succeed

Today I read "Macs Are for Kids Too" [*Note Pad*, *Macworld*, March 1985]. I am a 9th-grade student taking art and technical drafting as elective courses, and I would like to inform you that we have one Macintosh in each of those classes.

In drafting I am doing a project on the Mac that I did earlier on the drawing board. The Mac drawing will be used by my teacher in comparison with the pencil drawing for a computer progress report that he must submit at the end of the year. Although I am very familiar



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## 1 Control Center



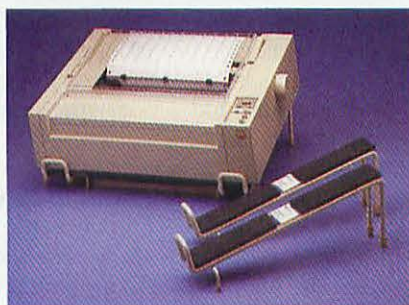
Organizes all your power needs. Styled to fit underneath your second disk drive, it provides fingertip control over your whole system. There's a master switch to power the whole system on and off, and individual switches for a printer, modem and one auxiliary device. And Control Center protects your entire Macintosh system from damaging power surges, line noise and static shocks.

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Portable protection for a travelling Macintosh. Surge Suppressor replaces your power cord, providing UL listed surge suppression and line noise filtering. It's light and fits easily into your carrying case.

## 3 Universal Printer Stand



Raises your Apple® Imagewriter® at a slight angle so you can monitor its performance more easily. It solves the problem of where to store paper—several hundred sheets are accommodated neatly underneath. (Also fits most other dot matrix printers.)

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If you want to take advantage of the AppleTalk™ network, a LaserWriter™ printer or a hard disk in addition to your Imagewriter and modem, you'll have three peripherals competing for the two serial ports on your Macintosh. The A-B Box gives you the extra serial port you need. Just plug two of your peripherals into the A-B Box and plug the Box into one of your Macintosh serial ports. Then simply divert your data output to the peripheral of your choice—press A to send to one, B to the other. Fits perfectly underneath your external disk drive.

## 5 Tilt/Swivel



Gives you the flexibility to tilt and swivel your Macintosh to the viewing angle most convenient for you.



## 6 Polarizing Filter



The solution to a glaring problem. Made exclusively for Kensington by Polaroid®, it protects your eyes by reducing reflected screen glare by up to 99%. Also improves screen contrast. Easy to install.

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## 9 Mouse Pocket



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## 11 Disk Drive Cleaning Kit

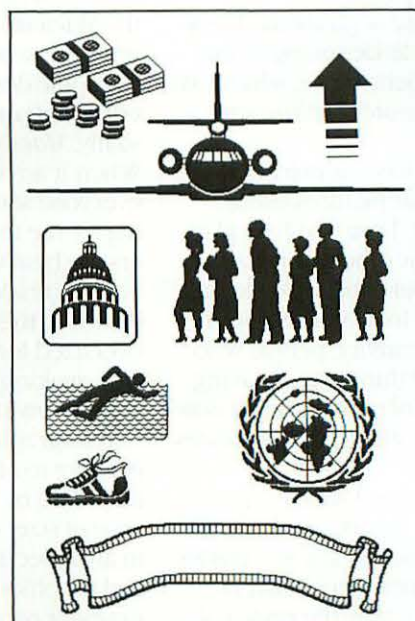


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## 12 Graphic Accents

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## 13 Professional Type Fonts

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Also available:

## 14 Swivel

## 15 Portable Modem

## 16 Travelling Disk Case

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with the Mac, my limited drafting skills prevent me from doing more sophisticated projects such as designing an energy-efficient house, which two 13th-grade architecture students did.

In art I have drawn many spectacular pictures using *MacPaint*. I use it to help plan designs for other projects, which would take much longer manually. Indeed, the Mac enhances creativity; people who would not think about staying after school to work on art now race to be able to draw pictures on the Mac.

In my school we have four Macs: one for art, one for drafting, one used by the secretaries to design newsletter covers, and one used by the principal for administrative purposes. We also have Apple IIs, but they are not used as eagerly or as creatively as the Mac is.

Moni Islam  
Ottawa, Ontario  
Canada

### Accelerated Enthusiasm

My first serious introduction to the Macintosh was through the premier issue of *Macworld*. As a graphic designer I am very critical of printed material. Visually, *Macworld* is fabulous. When it arrives at my office, everyone stands around waiting for me to unveil it. The covers are beautifully executed, and the reader is immediately drawn to the key topics. And its oversized format is a definite plus, making it easily recognizable on any magazine rack.

Typography is an important element to *Macworld*, exemplified by the consistent balance of size, weight, and style in all aspects of text, headlines, and graphics. The flush-left, rag-right copy adds to the friendly quality inherent in the Macintosh. Justified type would seem rigid and formal. The matte paper on which *Macworld* is printed is a refreshing change from conventional

glossy stock. As for the interior of the magazine, a commendable integration of editorial and visual content is apparent throughout.

Lisa Marks-Ellis  
Evanston, Illinois

### Apples and Oranges

We've all heard the praise heaped upon the Macintosh since its introduction. Now it's time to hear about a lesser-known machine, one that I call the MacLemon.

I'm quite qualified to write about the MacLemon. I have one. During the past nine months I have had a bad speaker, a bad logic board on the Imagewriter, the CRT replaced, a dead mouse, and three power supply modules; now I'm attempting to figure out how I can get around melting and then bending the arm on each new ribbon cassette I buy so I can feed cut-sheet paper. Currently the cassettes press against the platen, block-

ing the paper path. Of course, this situation is unique to the MacLemon.

I know I will continue to hear how fantastic the Macintosh is. But remember: every time you turn on your marvelous machine, there are a few poor souls who have the MacLemon, who know what courage it takes just to flip on that little power switch.

Daniel Nigh III  
Sierra Madre, California

### Think, Don't Drive

Apple doesn't know how to sell Macintoshes. Unfortunate, but true. Other computer companies don't know how to sell computers either. Computer companies are selling computers the same way you sell a car. The emphasis is on engineering and appearance.

Because of the way computers are promoted, most people are making purchase decisions



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Amazing  
what goes  
into  
Macintosh  
these days.

---



# IBM PC software, for instance.

Macintosh and IBM PC software. Compatible at last, thanks to MacCharlie, a rather innovative coprocessing system.

And imagine the consequences.

Nearly 10,000 IBM PC software programs designed for general business and specific applications in real estate, insurance, law, medicine, banking, etcetera, can now join forces with Macintosh's own popular programs.

And, the myriad of IBM PC-compatible software adopts Macintosh's many beloved features, including desktop

utilities such as the clipboard and the calculator.

In addition, MacCharlie allows IBM PC and Macintosh data files to be exchanged. Talk about flexibility.

But the good news gets better.

You see, MacCharlie delivers hardware compatibility, as well. For example, IBM letter-quality printers can be easily used with Macintosh.

Furthermore, MacCharlie

now allows Macintosh to perform virtually any networking an IBM PC can perform. Even to the extent of tying in with IBM mainframes.

In other words, your networking capability goes beyond the Apple family.



The Macintosh keyboard slides right into MacCharlie's keyboard. About as easy as slipping a letter in an envelope.



Macintosh sets snugly beside MacCharlie, on a custom-fit pedestal.



Once you plug in MacCharlie's power and keyboard cords, you're ready to enjoy a very happy marriage.



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square inches to Macintosh's physique.

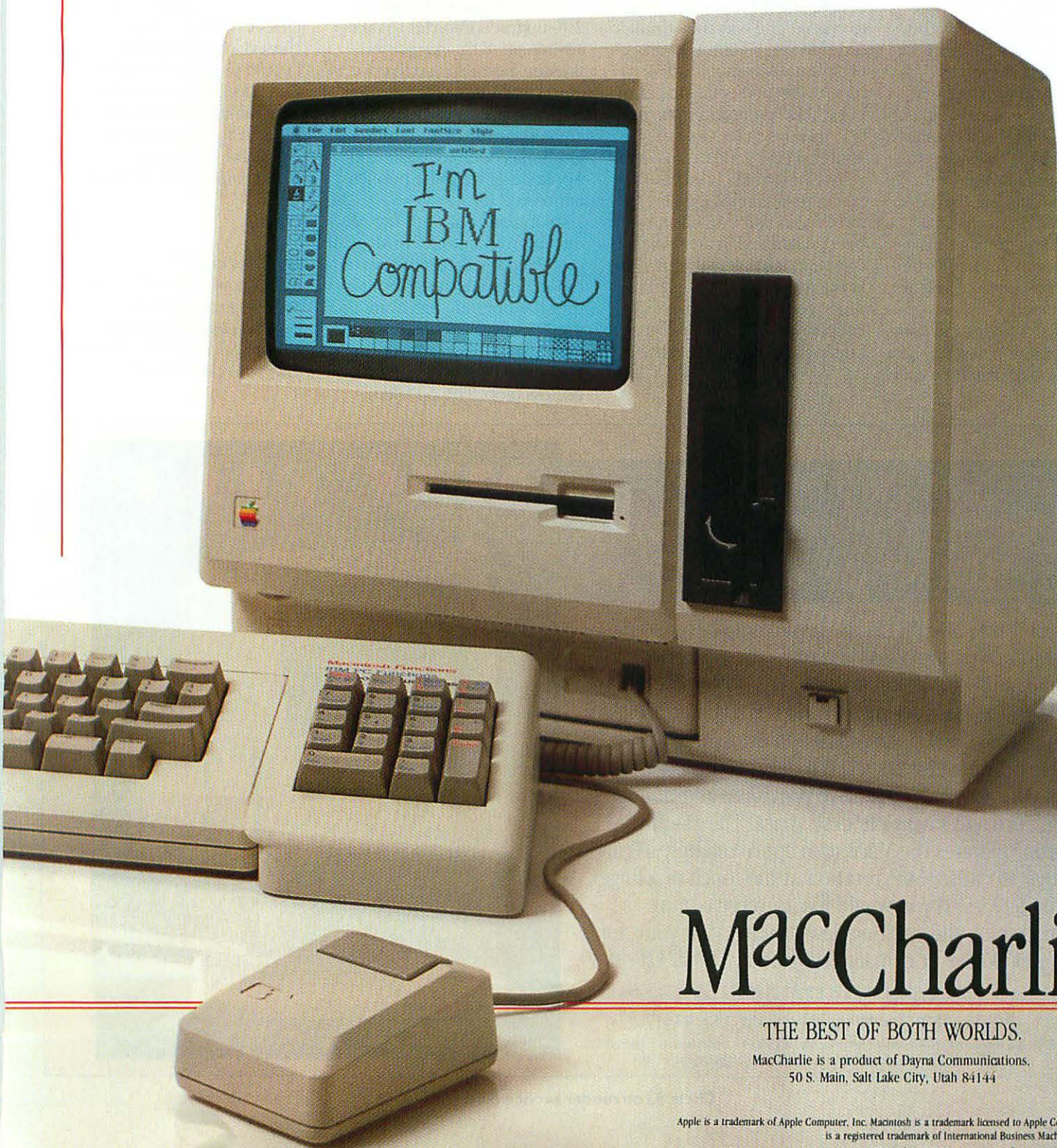
In short, one of life's most perplexing decisions—whether to buy a Macintosh or an IBM PC—can now be made with the greatest of ease.

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computer store. Suggested retail price for the 256K single disk drive model is only \$1195, and just \$1895 for the 640K dual disk drive version.

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MacCharlie offers 256K RAM, with optional upgrade to 640K RAM; 360KB disk drive, and optional second disk drive.



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backward. First they look for the machine that is most powerful and comes with a good maintenance contract. Then they buy the most recommended or popular software. Finally, they take it all home and try to learn how to use the computer. That's where the problems begin.

The choice of which computer to buy should be the last decision, not the first. People should first examine how they think, write, and analyze and work with data. Next they should pick the software that best fits their personal cognitive style. Only then are they ready to pick the hardware to run the software. Your brain has an individual bias in the way it perceives, stores, processes, and transmits information. Your computer had better be brain-compatible or you are fighting yourself.

Software designers and computer companies haven't done a very good job of matching their

products to people's cognitive styles—except Apple, which has two kinds of computers that could cover the spectrum. But Apple doesn't know how to market its computers.

People in the industry talk about "user-friendly" characteristics, but primarily in the context of person-machine interface. I'm talking more about a brain-program interface. People should no longer have to change the way they think in order to use a computer and its programs. A computer doesn't have to be an electronic brain, but it should present information in ways that can easily be appreciated by the brain.

The potential of the Lisa/Macintosh technology for cognitive compatibility has never been described in an Apple ad. I hope that Apple will quit emulating the advertising used by other computer companies. People should be given the kind of information that they

need to make the right decision for themselves.

*Loren D. Crane  
Kalamazoo, Michigan*

### Xtra Lamentable

My office was an early purchaser of the Lisa (back when it was \$10,000), and we have many important applications on the basic Lisa tools. About six months ago we bought a 2/10 upgrade in order to take advantage of the purported greater speed and so that we could use *MacWorks*, gaining access to the software being created for the Mac. The upgrade has been a disaster, and Apple deserves to be publicly lambasted for it.

As it turns out, very few Macintosh programs can work at all on the Lisa with *MacWorks*. Additionally, something about either the upgrade hardware or the 7/7 software causes the machine to deteriorate over the course of a few weeks into a useless blob. The problem

starts with absurdly slow printing in both the Mac and Lisa modes and degenerates to crashing the Profile (the Lisa hard disk) and crashing under every Mac program. Continued attempts by the dealer to repair and replace hardware elements, along with a new version of the 7/7, have helped for only a few weeks before the degeneration resumes.

I am thoroughly disgusted. One of the major reasons I purchased a Mac so quickly was so I could use it with our Lisa. Considering my experience, I now remain committed to Apple only for financial reasons.

*Robert W. Gilstein  
Lakeville, Massachusetts*

*Letters should be sent to Letters, Macworld, 555 De Haro St., San Francisco, CA 94107, or sent electronically to CompuServe 70370,702 or The Source BCW440. □*

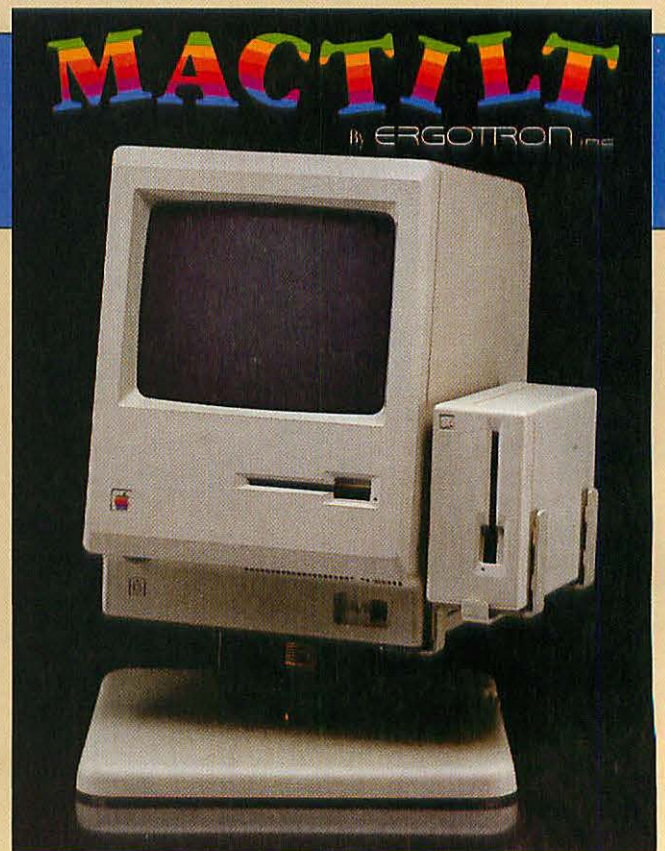
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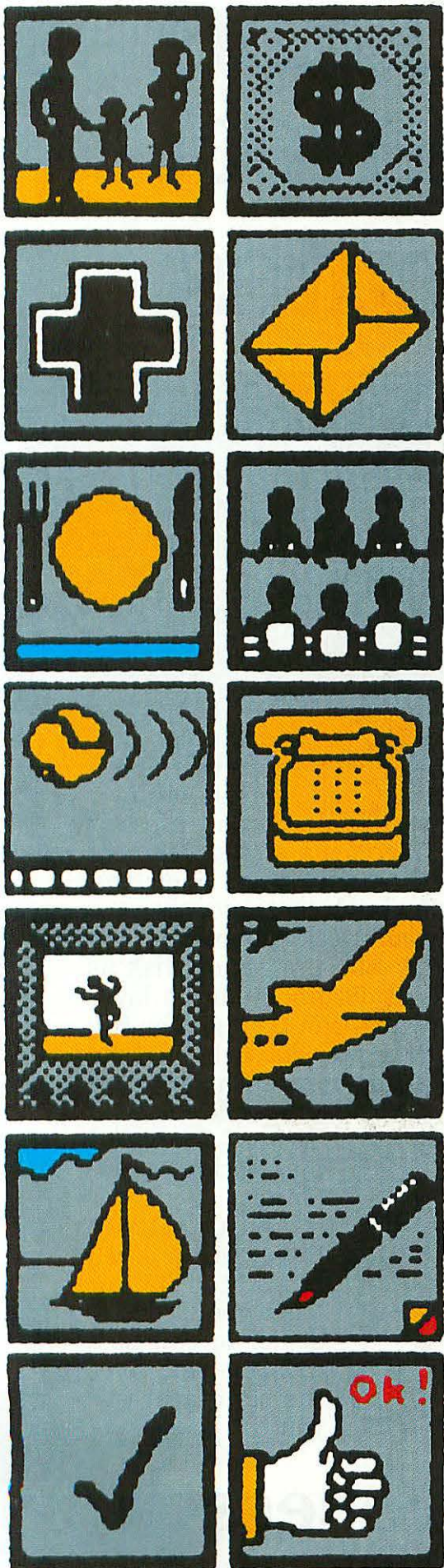
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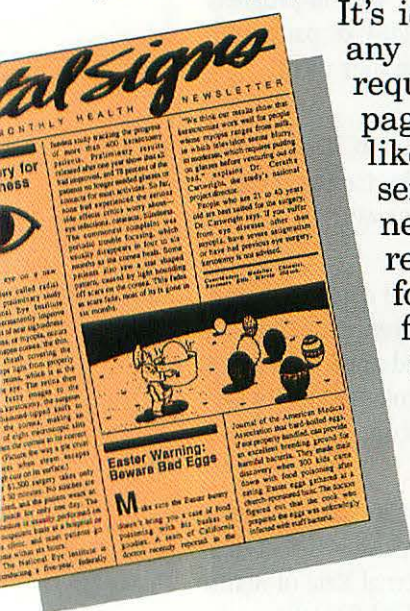




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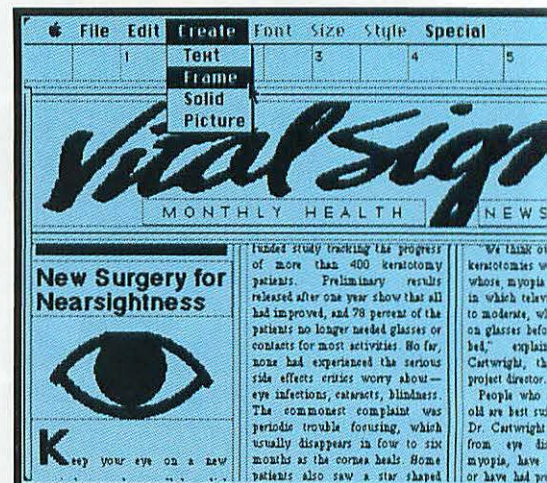
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Tony Gluck,  
President,  
Libra Press,  
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## The Ultimate Page Processor™

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# "Good grades."

Infoworld					
REPORT CARD					
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	Poor	Fair	Good	Excellent	
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Ease of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Error Handling	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Support	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

April 1, 1985: "OverVUE is rich in features that rank it with the more sophisticated databases available for the Macintosh...the more we worked with it, the more we came to respect OverVUE's power and capabilities, not to mention its speed."

According to **MACWORLD**, January, 1985: "OverVUE is a fascinating program. A cross between a data base manager and an electronic spreadsheet. ...Its ability to share data with Multiplan makes it a must for serious financial work."

**A+**, February, 1985 said: "OverVUE is Macintosh software the way it was meant to be. ...Speed Demon. ...geared especially for lightning fast performance. ...Extremely easy to master."

**PERSONAL COMPUTING**, February, 1985 wrote: "OverVUE can execute

The report cards are in. And OverVUE has earned high marks among databases for its mind boggling speed, its incredible range of features and its amazing power. Now we could elaborate on these things ourselves. But we figure you'd rather hear it straight from the experts who make out the grades:

Reported **INFOWORLD**,

almost all of its commands in the blink of an eye, or two blinks at the most. ...Its speed and math capabilities go well beyond what most personal computer data base programs have achieved. ...it definitely can make the Mac you already have a much more useful tool."

Apple placed OverVUE on its demanding "**MUST BUY**" List, November, 1984: "Does more with less effort than anything we've ever seen. ...A Gem."

Stated **CLUB MAC**, September, 1984: "I know of no other data base that can touch it. ...Lots of power here. No doubt about it, this is a sweet system. ...It sets a behavioral standard for programs in its class."

Praised **MACAZINE**, December, 1984: "It may be the best money you've ever spent. ...The amount of pure data analysis one can do with their files is mind boggling. ...This is the Macintosh at its best."

Well, there you have it. We could have filled up pages with quotes like these, but we think you get the picture. Obviously, we're not the only ones who think OverVUE is terrific. An enormous number of

knowledgeable experts feel pretty much the same way.

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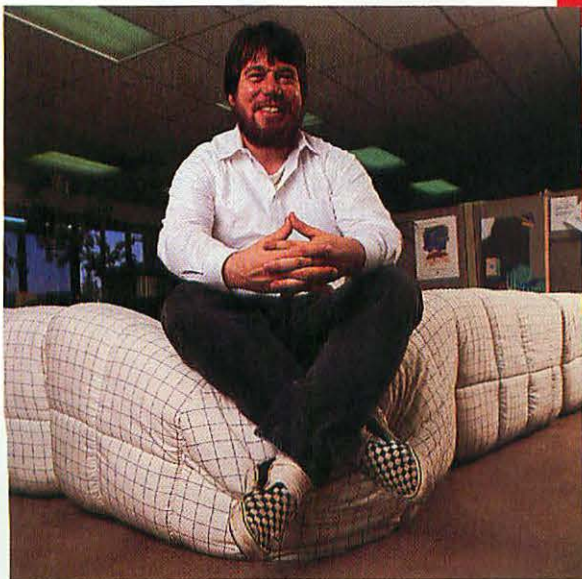


# Macworld View

*The Finder's latest incarnation, COBOL comes to Cupertino, public-domain masterpieces, and more*

**Edited by Herschel Schmedick**

*The Macintosh community is expanding rapidly, and I've come across some interesting items to share with you. With over 300,000 Macs delivered and more on the way, I suspect that many of you have had some strange or enlightening encounters with the Mac. Or perhaps you've heard of someone else's unique experience with the Macintosh. Your contributions are welcome; Macworld pays up to \$50 for each item published. Send your contributions to Macworld View, 555 De Haro St., San Francisco, CA 94107. I look forward to hearing from you.*



## Lives of the Finder

I ran into Macintosh programmer Steve Capps about noon at Apple's Cupertino headquarters, dressed in his usual jeans and white shirt and wearing his trademark raster shoes—canvas loafers with black and white squares resembling a raster screen. He had just arrived from an all-night session working on a new version of the Finder.

Before Capps releases a version of the Finder to his battalion of testers, he christens the program with a new name, such as Swizzle, Spandex, Sterno, Snafu, and Sysiphus. Capps says he had an unexplained preference for S's while working on a new Finder. The prerelease version Capps demonstrated, named Stalemate, has several new features. Here are the highlights:

- The Finder I saw is much faster than the original version. Opening or closing an application from the desktop takes about 15 seconds compared to about 30 seconds with the old Finder. In addition there is a "quick" Finder called the Mini-Finder. You can place up to 12 applications or documents in a special MiniFinder window. When you double-click on an application or a document (or

select the file and click the Open button), the program appears on the screen in about 5 seconds.

- The File menu contains a New Folder command that, true to its name, creates a new folder. Since the Empty Folder icon no longer exists, you don't have to make a copy of the Empty Folder to get a new folder.

- With the original Finder you had to display files as icons to move documents or applications around the desktop, put them in the trash, move them to other disks, or rename them. The new Finder lets you make those modifications from any of the View menu options.

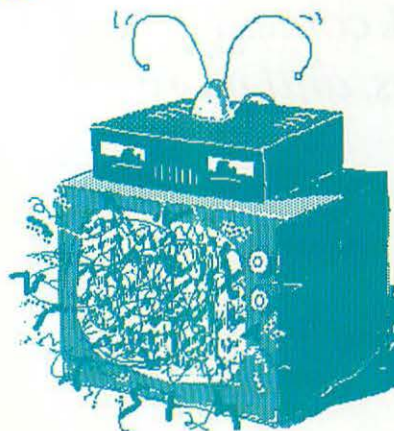
- A Shut Down command in the Special menu ejects the disks in one or both drives and reboots the Mac in record time.

- The new Finder includes some shortcut commands. Holding down the Option key while you click the Clean Up command rearranges the icons, starting from the top-left corner, in neat rows.

Stay tuned for further lives of the Finder.



## Mac to VCR Update



Unless you want to spend a lot of money, connecting a Macintosh to a VCR probably isn't something you should attempt at this time. While several products are available that bring the Mac's video signal to an external monitor, the video signal is incompatible with a VCR and, in fact, can't be used with most low-resolution monitors.

The Mac's video signal isn't compatible with a VCR because the Mac's horizontal scan rate is 22.25 kHz. In other words, the Mac beams a horizontal line of dots on the screen 22,250 times a second. Most standard monitors have a horizontal scan

rate closer to 15kHz. If you connect the Mac's video output to a low-resolution (12- to 15kHz) monitor, you end up with only a blur on the screen, since many of the dots that make up the image don't get displayed.

The easiest and cheapest method of displaying Mac screens on a VCR is to record them with a video camera. But be forewarned that you're going to lose a lot of resolution, and the resultant image will lack detail.

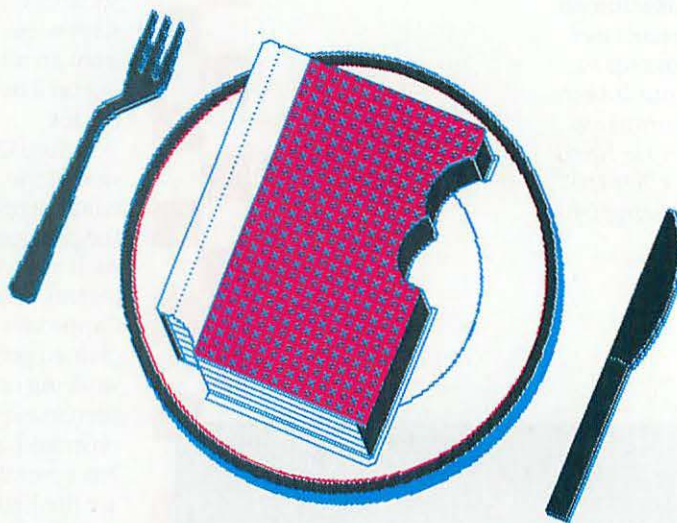
The Mac's screen can be displayed on a low-resolution external monitor by using a *scan*

*converter*. Primarily because of the cost of \$20,000 to \$60,000, you don't find these devices except in the hands of video professionals. Video scanners take a video input—say a screen image from the Mac—and store the image in internal memory or in a buffer. The image can then be sent out at a new scan rate, say to a VCR or another low-resolution monitor. Nice, but expensive.

But videophiles take heart. If you're willing to wait, you can probably expect to see an affordable scan converter by the end of 1985 that will allow you to connect the Mac to a standard television monitor or VCR.—David Usbijima

## Macintosh BASIC Book Blues

As I was sitting in my office one bright morning, itching to get outside, I received a call informing me that MacBASIC from Apple Computer would be delayed another few months. Glancing at my bookshelf, I spied two handsome books on MacBASIC: *The Macintosh BASIC Handbook*, by Thomas Backadar and Jonathan Kamin (Sybex), and *Introduction to Macintosh BASIC*, by Scot Kamin (Hayden). My sources tell me several other MacBASIC books, including ones by Emil Flock and Jim Heid, are stockpiled in the warehouses of unhappy publishers, waiting until



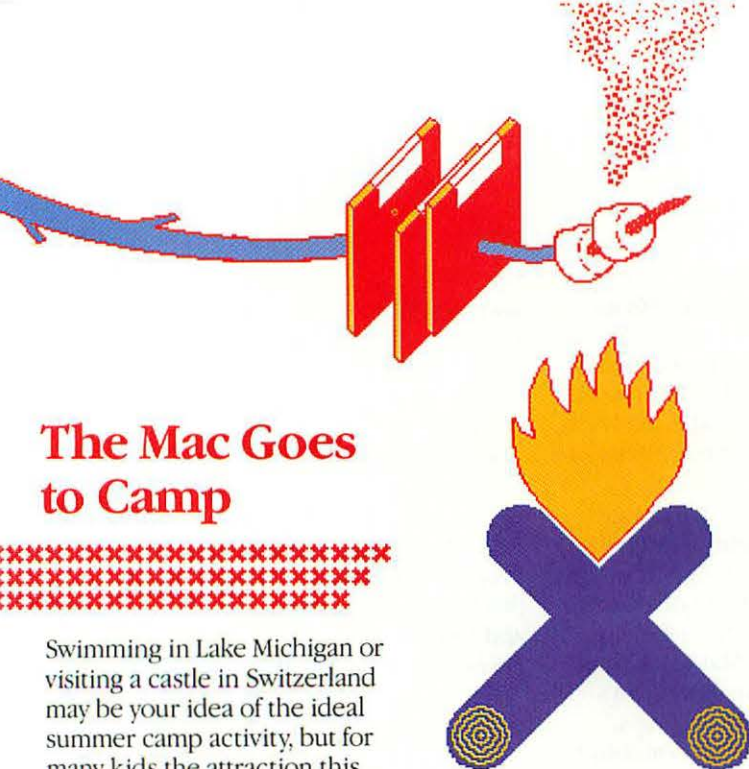
the product reaches computer store shelves.

Publishers waiting in the wings with their wares should take note. According to Mike McGrath, senior editor of Hayden Publishing, "Sales for Kamin's book, which was published in November, were super. In fact, the book outdistanced our sales projections. I

have to believe that there is a lot of pent-up demand for the language."

Hopefully, the people buying those books and coincidentally waiting for the program to be released won't lose their appetites.





## The Mac Goes to Camp

XXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXX  
XXXXXXXXXXXXXXXXXXXX

Swimming in Lake Michigan or visiting a castle in Switzerland may be your idea of the ideal summer camp activity, but for many kids the attraction this summer will be computers.

Six years ago Lowell Carmony started a computer camp with Apple IIs at Lake Forest College in Lake Forest, Illinois, on the shores of Lake Michigan. This year he is adding the Macintosh to the curriculum. The camp offers one-week sessions for 50 to 60 boys and girls aged 10 to 16.

Since most of the students who attend the camp are interested in programming, Carmony plans to teach Microsoft BASIC and MacPascal. Although athletics are a part of the day's activities, Carmony claims athletics have to be required to get the kids outside. A standing joke among the teachers is that the students' idea of the optimal computer camp "would be a room full of computers with some sleeping bags, and pizzas served every 6 hours."

Susan Riskind, director of Compute Camp International, is running the first residential

computer camp in Europe. Macintoshes, instructors, and approximately 50 boys ages 14 to 17 will set up camp at the Institut Montana in Zug, a town 18 miles south of Zurich. The course, which will be taught in English, introduces the students over a three-week period to programming, graphics, databases, spreadsheets, and word processing.

When asked why she chose the Mac, Riskind replied that she thought "the kids could learn on it quickly and pick up the kinds of computer skills they would need for academic work."

Next year maybe she'll allow girls to attend the camp as well as boys.

She plans to set up a corporate office in Neuchatel, Switzerland—a high-tech area—and offer computer camps and instruction to adults. If you're interested, contact Lake Forest College, Sheridan and College Roads, Lake Forest, IL 60045, or Institut Montana, 6316 Zugerberg, Zug, Switzerland. —*Janet McCandless*

## Banking on the Mac

Bankamerica Corporation's subsidiary Seattle First National Bank (Seafirst) recently purchased 1000 Macintoshes for its 167 offices. When asked why Seafirst chose the Mac when the bank was already using IBM Personal Computers, Timothy Turnpaugh, senior vice president and manager of operational technology, responded, "Economics and economics." Turnpaugh's aim is to arm every professional at Seafirst with a computer that's easy to learn, and he says the Mac is the linchpin of that strategy. Switching from PCs to Macs lowers the cost of training employees to use computers, and Turnpaugh does not have to be concerned with turning bankers



into computer technicians. "Most people want to use a tool to get the job done and then move on to the next problem they have to solve," Turnpaugh says.

A San Francisco branch of Seafirst's parent company, Bankamerica, is evaluating the Mac as a tool for its middle managers and may similarly purchase the Mac in large quantities. No doubt Apple is counting on these corporate purchases in its effort to establish the Macintosh Office. —*Janet McCandless*



## In the Public Domain

Having put a lot of time and effort into their masterpieces, many generous *Multiplan*, *MusicWorks*, or *WhatHaveYou* experts like to see their creations used and admired by others. Thus, many of the "programs" in the public domain are not programs at all, but templates for commercial software.

If you are well organized (or want to be), Club Mac's bulletin board contains a home budget template on Microsoft's *Multiplan* that can help you stay—or get—that way. The file name is BUDGET.MMP. Data Library 3 of MAUG on CompuServe contains a *Multiplan* payroll template for small businesses. To find the file, type the keyword *payroll* at the /KEY: prompt.

Looking for new ways to use *Filevision* or for sophisticated examples you can use to improve your *Filevision* database? Some of the most interesting and unusual *Filevision* templates are being circulated by the program's manufacturer, Telos Software, and are available from many user groups, bulletin boards, and computer

stores. The templates include many types of "maps" (from the locations of toxic waste sites in Michigan to the layout of the piano keyboard), organizational charts, and visually oriented versions of traditional filing problems.

Files for *MusicWorks* practically overwhelm MAUG's Data Library 4. They range from the sublime (a segment of Mozart's Clarinet Concerto in A Major, transcribed by Mark H. Kogan) to the ridiculous (Tiny Tim's "Tiptoe through the Tulips," transcribed by Rick Connolly).

The most visually satisfying templates, however, are *MacPaint* documents found in MAUG's Data Library 4. One is a

file of four cassette tape labels, all carefully measured and drawn by David Eilers; use the keyword *cassette* to find it.

Bart Thomas and Paul Dobbs created a similar template for Mac disk labels. Their *MacPaint* files located with the keywords *label* and *labels*, provide disk labels decorated with appropriate graphics and with titles written on the front, back, and spine. — Robert C. Eckhardt



"You were warned never to open your Macintosh!"

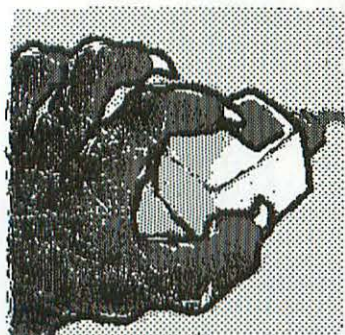
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## Quotations

A phrase often quoted by programmers: "If you come across a bug you can't fix, call it a feature."



# Beauty and the Beast



For the marketing wizards at Apple, who are looking to outwit IBM's formidable legions of salespeople and get Apple's wares into corporate America, it must have seemed like a match made in heaven when Micro Focus announced that it had wedded COBOL (Common Business Oriented Language) to the Macintosh.

People who rate computer languages usually place COBOL somewhere between Frankenstein and Godzilla. They note that this monster was created in the late fifties by something even worse than a mad scientist—a committee of business

executives, bureaucrats, and generals plus a few computer scientists. Instigating and leading the fateful endeavor was software pioneer and naval officer Grace Hopper, who, recognizing the need for standardization in government computing, led the committee through the herculean labor of creating a new computer language.

Three decades later, Commodore Hopper's brainchild seems to have survived—nay, thrived. COBOL truly lords it

over the world of corporate computing; by one estimate, 90 percent of all business applications are written in COBOL.

A strange match indeed: COBOL, the epitome of hulking, horn-rimmed, fifties-style computing, meets the eighties' debutante from Cupertino. But people at Apple don't seem concerned about a *mésalliance*. Consider the official response of Apple manager Dan Cochran as a study in understatement: "We expect Mac COBOL to give Apple the additional leverage we need in the business/government marketplace and to reinforce the other elements of Apple's Macintosh Office concept."—*Ted Nace* □

## Macworld's Top 10 Best-Selling Business Software

Months on chart	Last month	This month	Product
—	—	1	<i>Microsoft Multiplan</i> , Microsoft
—	—	2	<i>Microsoft Word</i> , Microsoft
—	—	3	<i>Dollars and Sense</i> , Monogram
—	—	4	<i>pfs:file</i> , Software Publishing
—	—	5	<i>Microsoft Chart</i> , Microsoft
—	—	6	<i>MacProject</i> , Apple Computer
—	—	7	<i>pfs:report</i> , Software Publishing
—	—	8	<i>MacTerminal</i> , Apple Computer
—	—	9	<i>Habudex</i> , Haba Systems
—	—	10	<i>Filevision</i> , Telos Software Products

Source: InfoCorp. Research conducted in March 1985.

*Macworld View* is adding a regular feature to its pages, *Macworld's* Top 10 Best-Selling Business Software chart. Research for the chart is conducted by InfoCorp of Cupertino, California. To collect the data, InfoCorp researchers survey computer retail store owners each month about the best-selling Macintosh business software. The data gathered reflects the number of units sold of each program. *MacPaint* and *MacWrite* do not appear on the list because they are usually included with the purchase of a Macintosh.





# How to Keep Your Macintosh<sup>TM</sup> from Frying to a Crisp

## Protecting Your Hardware From The 6,000 Volt Destroyer

Over 50% of all hardware and software complaints received by manufacturers have nothing at all to do with product quality. To the contrary, most damage reported is caused by surges in household or business current.

These surges continually degrade sensitive microcircuitry resulting in lost data and, even worse, computer repairs that are often mistakenly blamed on original equipment failure.

## 30,000 Volts At The Tip Of Your Finger

Another common danger to the computer, its peripherals and software, is static electricity. Few people realize that their bodies can carry as much as 30,000 volts of static.

The discharge of static electricity through the operator's fingertips can pose just as great a threat to your system as power line surges.

## The Faulty Ground

In addition to operator safety, a properly grounded computer is better able to drain off charges that would otherwise create dangerous voltage levels between the computer's chassis and microcircuitry. Again, the operator is typically not aware of whether the outlet is properly grounded and therefore risks both the operator's safety and hardware damage.

## RFI Can Play Havoc With Your Image

While RFI (Radio Frequency Interference) is not a source of damage to computer or operator it can play havoc with the monitor image and to software. RFI is caused by nearby radio stations, the operator's own radio or television, as well as other electrical devices. RFI shows up on the monitor as a scrambled image and may also appear as data that has been garbled while in memory. If for no other reason, the computer operator should guard against RFI simply because its effect can nullify the time saving benefits provided by the computer.

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- It provides an anti-static pad you need only touch to safely drain off harmful static.
- It provides an LED light to indicate proper ground of your electrical outlet.
- It provides RFI attenuation to assure a clean monitor image and software safety.
- A master on-off switch provides convenient control to power up your computer and two other peripherals.
- MacGuard has a one year limited warranty.
- If you're not satisfied within 30 days, return MacGuard for a full refund.

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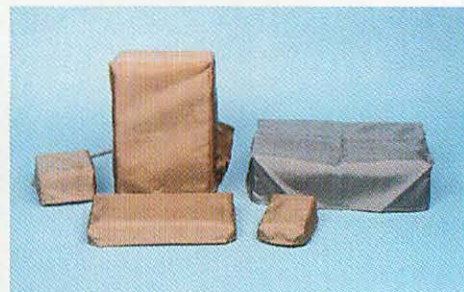
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Look out, the transport plane just air-dropped a tank. Back to the anti-aircraft gun. A tank that makes it down to the ground shoots with deadly accuracy. And then... the jets come screaming in like banshees. Their air-to-ground missiles don't miss!

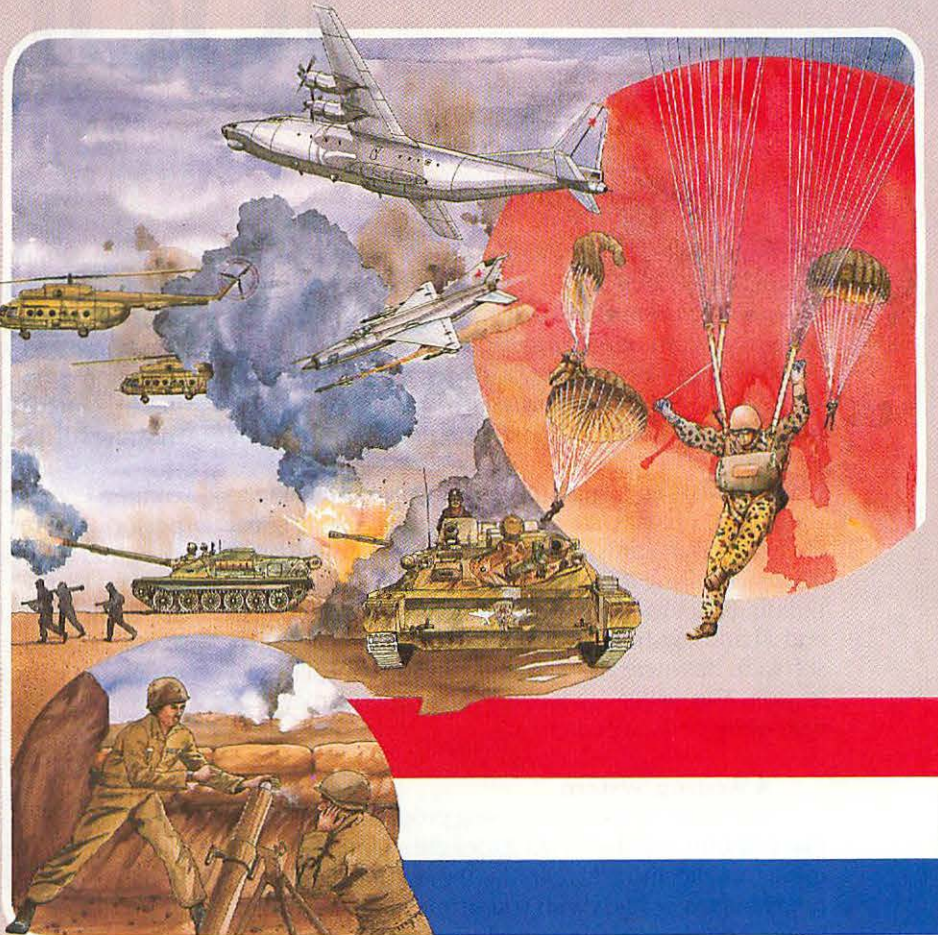
HOW LONG CAN YOU HOLD THEM  
OFF?

## REAL SOUND

This game has the most realistic sound generation available on a Macintosh. Helicopter rotor wash, the drone of transport planes, the shriek of an attack jet, tank fire, explosions... **actual recorded sounds** were used in the making of this game. You won't believe your ears. Is this a Macintosh or is it a cassette tape player!?

## A COLLECTOR'S ITEM

Besides all the fun you'll have playing it, you'll want to own this game so you can show off the graphics and sound capabilities of your Mac to all your friends. Every Macintosh owner will want to have **Airborne** in their collection.



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# The Writer's Tool Chest

**Jeremy Joan Hewes**

*In certain ways writing is like building a house. The writer's ideas and words are like the carpenter's blueprints and materials, and each artisan learns precise skills in mastering his or her craft. The tools a writer uses—like those of a carpenter—can be fundamental or highly specialized, but the more sophisticated the tools, the easier it is to produce fine work.*

For a distressingly long time, writing tools available for the Macintosh were strictly fundamental. The original tool, *MacWrite*, provides the basic text-handling operations, but using it for a complex writing task is like building a six-room house with only a hammer, nails, and a handsaw. In recent months, however, Macintosh software has increased dramatically in scope and selection. The writer's tool chest can now rival that of the well-equipped carpenter.

## **A Writing System**

Of course a word processing program is the primary resource in the writer's tool chest, because you use it to write and edit text. But the writing process rarely begins or ends with you sitting at the keyboard, generating new prose or revising old work. For most authors, writing also involves dreaming up topics for new projects, gathering information from a variety of sources, trying to impose some logical organization on a diverse collection of facts and ideas, and—eventually—proofreading the final draft.

Fortunately, a number of application programs for the Macintosh automate the different stages of the writing process. The programs give you the ability to use the computer more productively and integrate it more

completely into the task of writing than if you used a word processing program alone. Some programs, such as spelling checkers and thesauruses, work with files you've created with a word processor. Others, such as communications software and data management programs, create files that are initially separate from those in your word processing program.

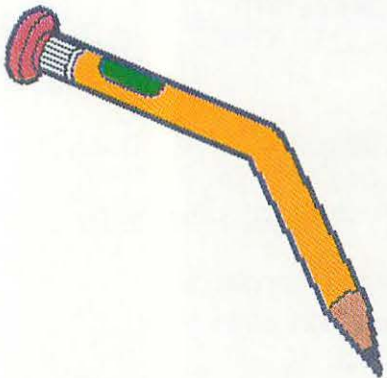
By assembling a group of such programs, you can create a complete writing system flexible enough to perform chores that a word processing program is not designed to handle. The specific programs you choose depend on the type of writing projects you do. If you are writing a historical novel, for example, a data management program is an efficient tool for keeping events and characters in chronological order. Or if you must do extensive research, you can save significant time and trouble by searching vast sources of information in computerized databases with the Macintosh via a modem.

My own tool chest consists of four categories of programs, not including a word processing program, which is not discussed here. I don't use all the programs for every writing project, but some aspect of my work as a professional writer has benefited from each of these tools. Obviously, my choices do not include all the software that could serve as writing tools, but the four categories cover the major steps in the writing process.

## **Brainstorming**

Usually, the first step in a writing project is generating ideas. Even though I frequently scribble an idea on a scrap of paper while I'm at my desk or in line at the post office, the time comes when I must put my ideas in logical order, preferably in a tidy and useful format.

An outline's traditional structure, with major ideas taking the leftmost position and successively less important ideas indented below, forces you to both capsule your thoughts and organize them in levels of coordination or subordination. Once completed, a



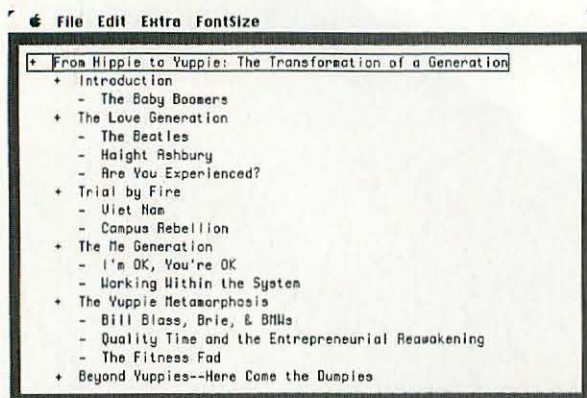






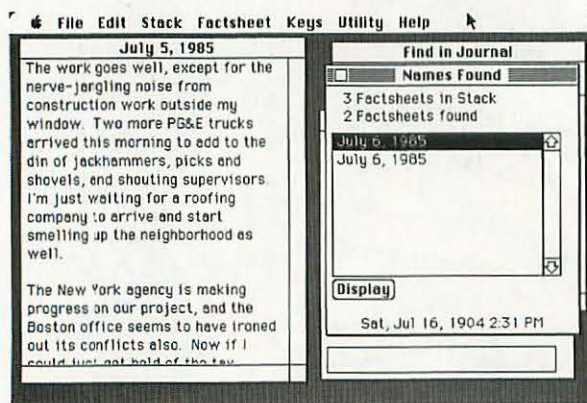
**Figure 1**

Outlining ideas with a program like *ThinkTank* helps writers develop an orderly framework. The program indents information in levels of headings and sub-headings that you can easily rearrange as you examine the relationships among items or ideas.



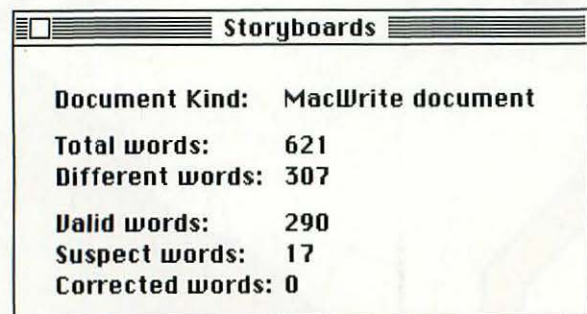
**Figure 2**

The data management program *Factfinder* allows you to record notes and other information in a relatively unstructured way while giving you the ability to recall notes on specific topics. The figure shows the results of a keyword search.



**Figure 3**

When you click the *Hayden:Speller* icon and choose a document, the program performs a search and shows a tally window of the words in the document. Suspect words are those that aren't in any of the program's dictionaries.



good outline is likely to make your writing proceed more quickly than if you simply started writing, and it can keep you focused on your chosen topic.

*ThinkTank* is a useful program for both brainstorming and producing an orderly outline of your ideas. The program comes in two versions; *ThinkTank 512* has some attractive features not included in its 128K counterpart. Both versions share the two features I find most useful: the outline format and automatic indentation (see Figure 1). Once you create an outline, *ThinkTank* lets you examine and reorganize your ideas by allowing you to expand, collapse, or move groupings of heads and subheads. By making it easy to carefully plan a written work, the program can help you avoid the rewrites and the false starts that result from poor organization and half-baked ideas when you're actually writing.

Although brainstorming with an outlining program may take some getting used to (as it did for me), I find that the opportunity—or necessity—to create a structure for an article or other project makes the writing go more smoothly.

## Gathering Information

Most writing projects, large or small, fiction or nonfiction, require some research. Usually a writer goes to a library and manually searches through periodical guides, card catalogs, or microfilm to compile research materials. To save the time involved in this work, I frequently use one or more of the commercial database services for research tasks such as locating all the reviews of a certain computer program. These database services store information on large computers that you can tap into using a modem with the Macintosh. The services are excellent sources of specialized information in thousands of subject areas, and they are especially useful if you cannot conveniently get to a major library or if you need quick answers. (See "Combing the Electronic Archives," *Macworld*, May 1985, for more about database services.)

Tapping a database service requires a modem and communications software. The program I prefer is *MacTep*, public-domain software available from many user groups, including MicroNet Apple User's Group (MAUG) on CompuServe or Delphi.

Although its features are limited, *MacTep* is easy to use and lets you save files on disk for later editing, which is crucial to research and writing. Other suitable communications programs include *MacTerminal* and *Smartcom II*.

## Getting Organized

Just as a word processing program stores text, moves it around, formats it, and prints it, a data management program provides structure and easy access to a wide variety of words and numbers, collectively known as a database. Although this type of software is often described as complex and difficult to use, a simple data management program can be highly effective for taking notes, storing random thoughts and ideas, and later combining or reviewing the items on a particular topic.



## Tools of the Trade

### ThinkTank

Living Videotext  
2432 Charleston Rd.  
Mountain View, CA 94043  
800/822-3700, 800/443-4310 or  
415/964-6300 in California  
List price: 128K version \$145,  
512K version \$245

### MacTep

In the public domain, *MacTep* is available from user groups, including MAUG on CompuServe or Delphi.

### MacTerminal

Apple Computer  
20525 Mariani Ave.  
Cupertino, CA 95014  
800/538-9696  
List price: \$99

### Smartcom II

Hayes Microcomputer Products  
5923 Peachtree Industrial Blvd.  
Norcross, GA 30092  
404/449-8791  
List price: \$149

### Factfinder

Forethought  
1973 Landings Dr.  
Mountain View, CA 94043  
415/961-4720  
List price: \$150

### Filevision

Telos Software Products  
3420 Ocean Park Blvd.  
Santa Monica, CA 90405  
213/450-2424  
List price: \$195

### Microsoft File

Microsoft Corp.  
10700 Northup Way  
Bellevue, WA 98004  
800/426-9400, 206/828-8088 in  
Washington, Alaska, and  
Hawaii  
List price: \$195

### Hayden:Speller

Hayden Software  
600 Suffolk St.  
Lowell, MA 01854  
800/343-1218  
List price: \$79.95

### Mac Spell Right, The Right Word

Assimilation  
485 Alberto Way  
Los Gatos, CA 95030  
800/622-5464, 800/421-0243 in  
California  
List price: each program \$89

If you were writing a term paper on endangered animal species worldwide, for example, you might use a data management program to record research on species, habitats, and other pertinent information. Once stored in the data management program, information can be sorted according to subtopics that refer to specific sections of your paper. Unlike a word processing program, a data management program can work as an automated set of index cards, easily assembled and reassembled as required.

One practical program for this purpose is *Factfinder* (see "Just the Facts," *Macworld*, February 1985). Unlike most data management programs, which force you to fit information into a predefined format, *Factfinder* lets you take notes in free-form fashion on *factsheets* of up to four pages. When you want to collect the notes you've taken on a specific topic, *Factfinder* recalls related *factsheets* by searching for keywords that you designate (see Figure 2).

A few other programs deserve consideration if you create and manage images as part of the writing process. *Filevision* is a database program designed for graphic information, although it also stores a limited amount of text describing each image (see "Filevision: A Data Base in Pictures," *Macworld*, January 1985). *ThinkTank 512* allows you to store both text and

graphics, and it offers an animation feature that lets you display a series of text or graphic screens at intervals as brief as  $\frac{1}{60}$  second. Finally, *Microsoft File* is a general data management program that stores pictures in addition to text and numbers.

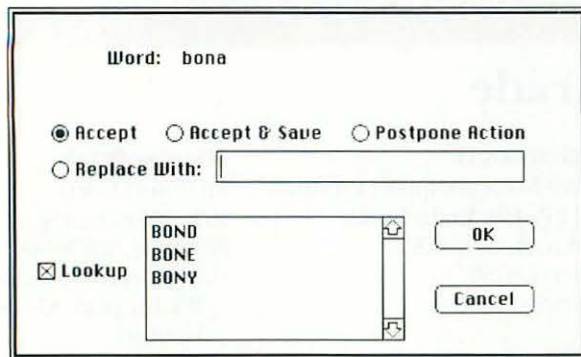
### Getting the Words Right

Another excellent use of the computer's power as a writing tool is to check the spelling in a written work. Although word processing programs help you create and format text documents, they can't detect spelling errors. Instead of meticulously proofreading your work, you can use a spelling-checker program to compare every word in your document against every word in its dictionary. This process takes a matter of seconds and uncovers most, if not all, of your errors. Even if you're an excellent speller, a spelling checker is worthwhile protection against the typing errors that seem to stumble into every writer's work. It's good practice to check the spelling in every document that represents you professionally.

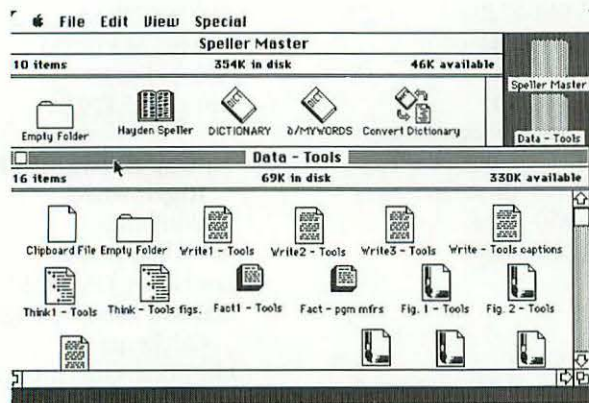
The program I find most useful for this purpose is *Hayden:Speller*, which contains a 20,000-word main dictionary. It also provides a personal dictionary that stores words you mark for inclusion (see Figure 3). You can also create new dictionaries, using a word processing program and a utility supplied with *Hayden:Speller*, as well as edit any dictionary except the main one.



*After a spelling check you can view suspect words individually in this dialog box, which offers you alternatives. Clicking the Lookup box lets you view words stored in the program's dictionaries that have similar spellings to the suspect word's.*



The disk windows of two working disks for a writing project. The top window contains the icons for Hayden:Speller, and the bottom window shows files used in this arti



The program provides several options for spotting and correcting errors. For a quick check, *Hayden:Speller* can display or print a list of words that are suspect because they're not in any of the program's dictionaries. You can't correct words at this stage, but you can verify whether the suspect words are spelled correctly.

If you find a misspelled word or choose to bypass the list, you can go to the correction stage of the program. You have the option of checking individual words or viewing them in context. Either method lets you accept a word as it appears, accept it and add it to a personal dictionary, correct it, or postpone action. The program also allows you to display words from the main dictionary that most closely resemble the spelling of the suspect word (see Figure 4). I find this feature especially useful when I encounter one of those slippery words whose correct spelling often eludes me.

*Hayden: Speller* works with *MacWrite*, *Microsoft Word*, and other text files created with the Macintosh. Another spelling checker, *Mac Spell Right*, provides a dictionary of 40,000 words and a thesaurus of 15,000

words for use with *MacWrite* files. For use with *Word* files, *The Right Word* provides the same dictionary and thesaurus.

*Mac Spell Right* is less versatile and easy to use than *Hayden.Speller*; but it may be preferable for writers who depend heavily on a thesaurus. Like its spelling checker, however, *Mac Spell Right*'s thesaurus is tedious to use. The thesaurus requires you to choose a word from its dictionary listing, select a category of related words, and view a third list, which finally provides the synonyms. For my time and money, a thesaurus in book form is easier to use and a far better resource than this program.

## Organizing Your Tool Chest

Once you've chosen the programs for your writer's tool chest, you need to establish a system of handling and labeling files for quick identification. Every Macintosh application program is represented on the desktop by a unique icon, but I can't always remember which program an icon represents. With several programs and associated documents the identification problem is exacerbated.

Clearly labeling files can save you a great deal of time and frustration by helping you readily identify which files are products of which tools. Like most writers, I prepare two or more drafts before judging a written work complete. So I use file names that reflect both the draft number and the program name. My naming system identifies the program first, followed by the draft number and the name of the writing project (see Figure 5).

Brainstorming, research, getting organized, and checking your spelling may not cover every stage in the writing process, but clearly ample software writing tools are available. With my word processing program (I still use *MacWrite*), my four programs—*ThinkTank*, *MacTep*, *Factfinder*, and *Hayden:Speller*—constitute a powerful and complete writing system that meets my requirements. Of course, when software useful to writers in other, unforeseen ways becomes available, I'll be ready to add it to my tool chest. □

■■■■■■■■■■ *Jeremy Joan Hewes*  
is a Contributing Editor of Macworld.



# Faster Figures



Now you can cut your data input time in half! With the Numeric•Turbo, a new high-speed input device combining the fast response of the Mac•Turbo•Touch\* with a full-scale numeric keypad. The Numeric•Turbo includes cursor keys and direct function keys, so you no longer have to use the Control or Shift key on the Mac keyboard for function entry. Figures flow directly from your fingertips to your Macintosh, making data entry with Numeric•Turbo 50% faster than with a conventional mouse and Apple keypad. Because there's nothing to get between you and your software.

Numeric•Turbo is ideal for use with Jazz,<sup>™</sup> Multiplan,<sup>™</sup> Ensemble,<sup>™</sup> Quartet,<sup>™</sup> Dollars and Sense,<sup>™</sup> and any other Macintosh software where you want your figures faster.

If you already own a Mac•Turbo•Touch and want to upgrade to a Numeric•Turbo, just ask your Apple Dealer for details. We've provided Dealers with upgrade kits that are easy to install and priced to please. And, we think you'll be more than pleased with how little it takes to accomplish a lot with Numeric•Turbo.

List Price \$149

\*The Mac•Turbo•Touch is another way to enhance your Macintosh's performance. This high speed input device is designed to respond as quickly as you do. The slightest touch of the gyroscopic ball positions the pointer quickly and accurately on the screen. The result is software that works even better, faster and more precisely. List price only \$109.



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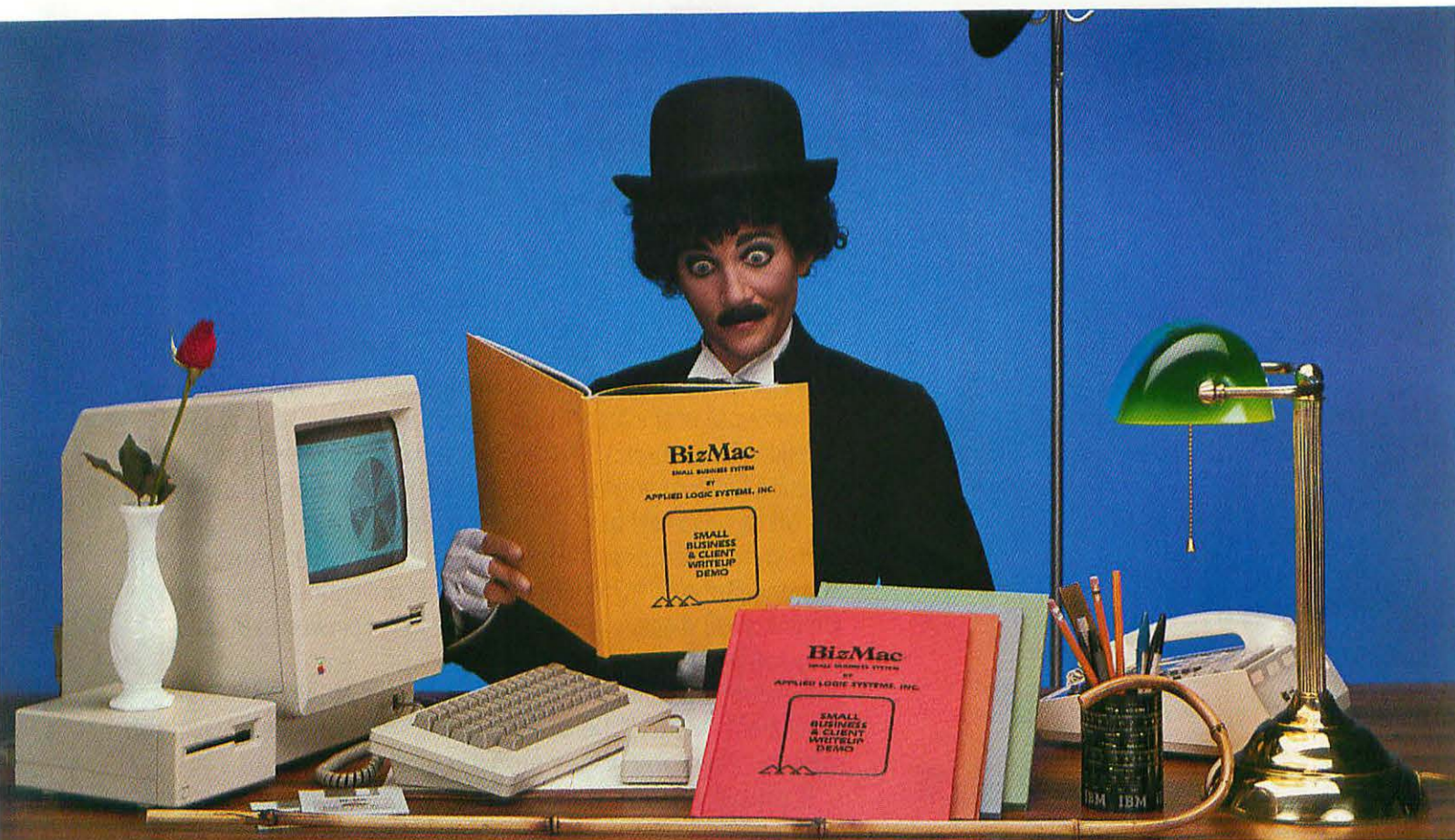
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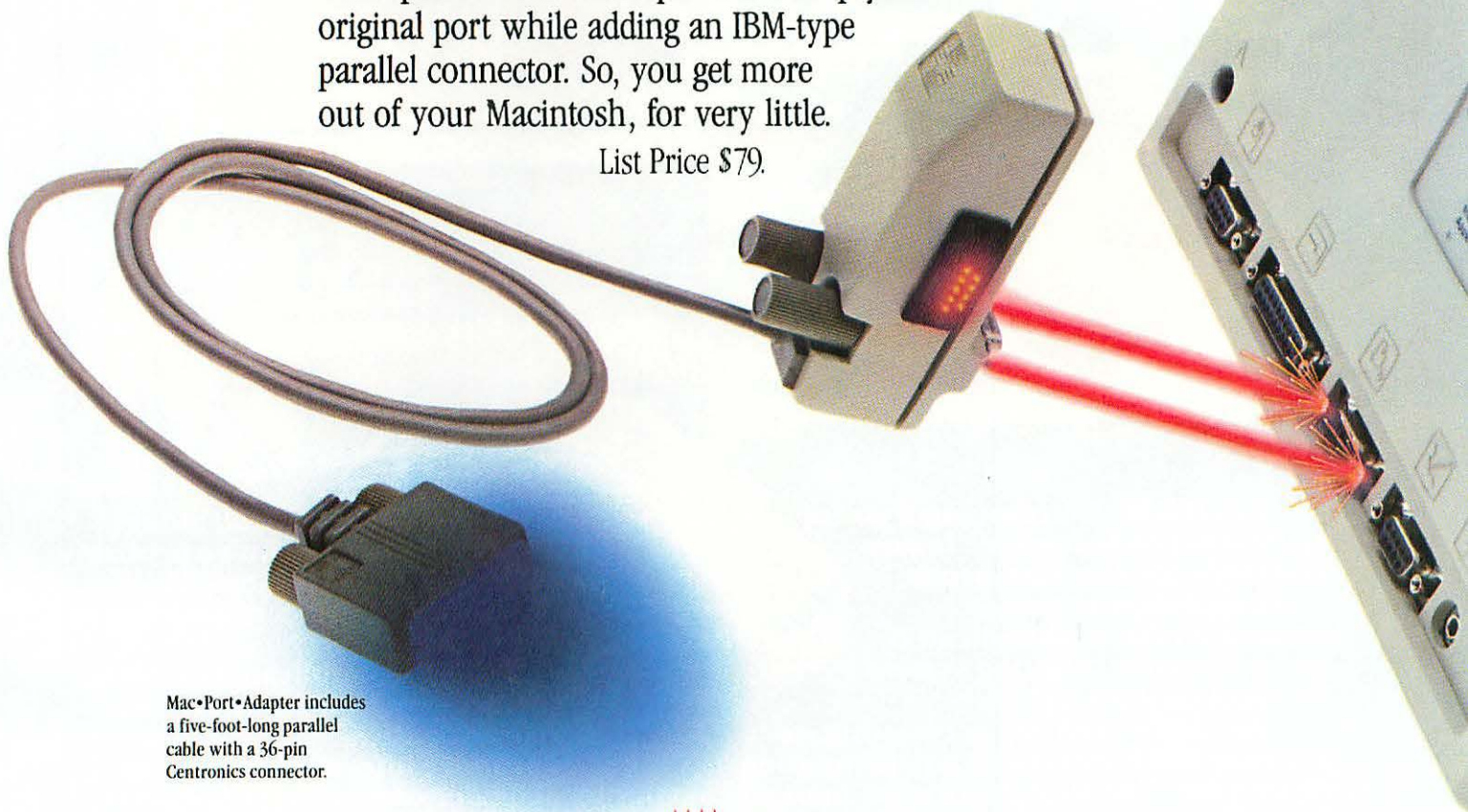


# Port Power

Introducing the Mac-Port-Adapter. Your Macintosh connection to the world of IBM-compatible peripherals. Designed to expand the capabilities of your Macintosh, the Mac-Port-Adapter allows you to team your Mac with top-of-the-line parallel peripherals. *And* keep your standard Macintosh serial port.

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Mac-Port-Adapter includes a five-foot-long parallel cable with a 36-pin Centronics connector.



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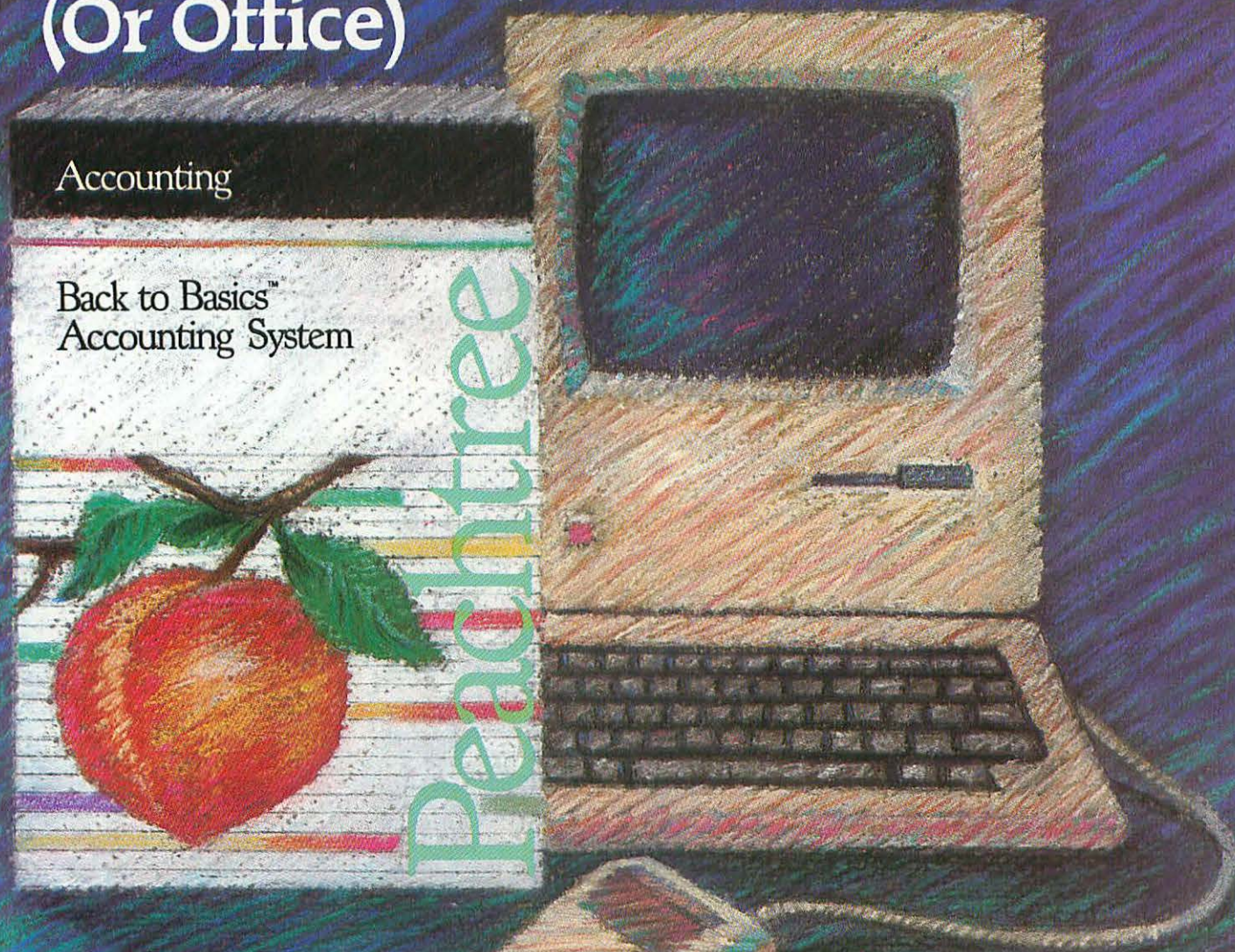
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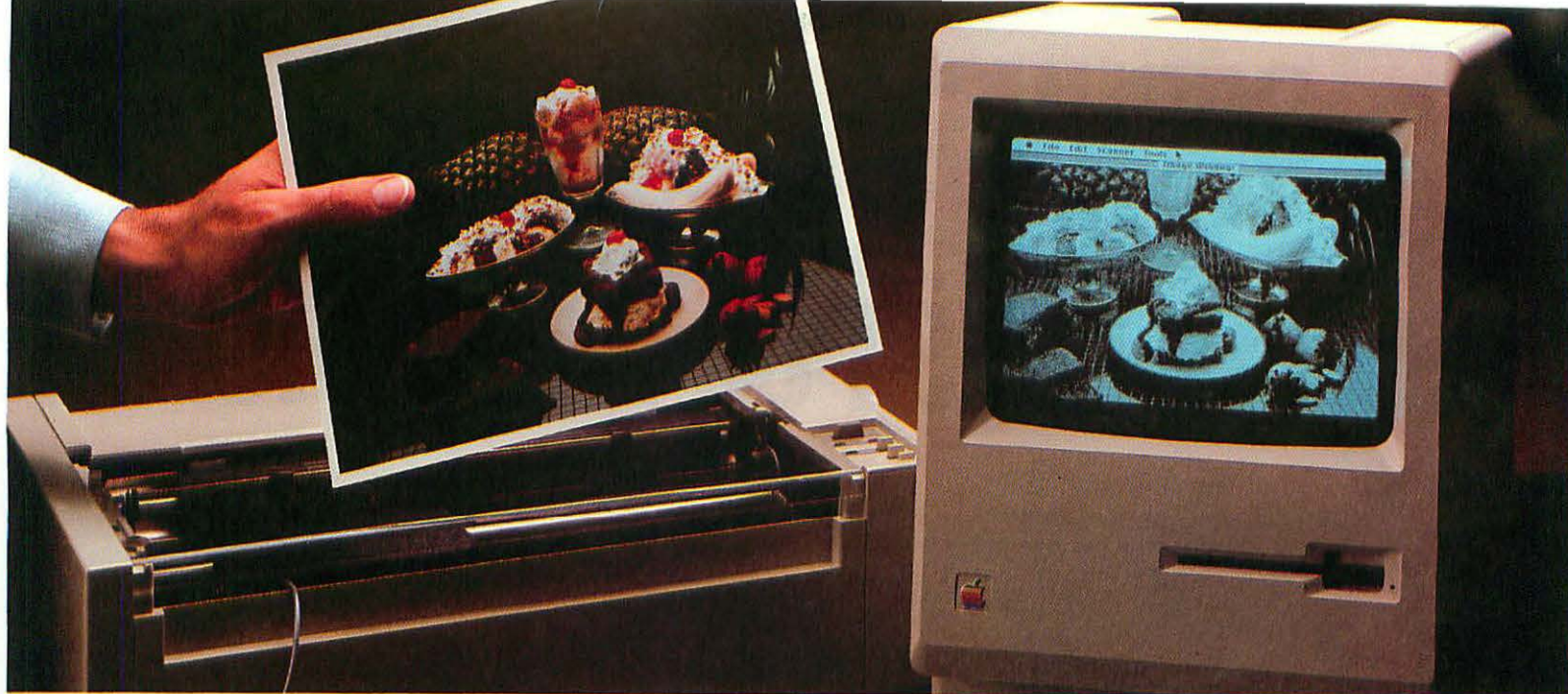
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# Feed your Mac.

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*Now you can turn any printed image into a detailed, high-resolution Macintosh graphic.*



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*Presto! A high-resolution MacPaint document.*

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ThunderScan turns Mac's Imagewriter printer into an image reader. So you can digitize any printed image and turn it into a detailed, high-resolution MacPaint document. Anything, including forms, half-tones, photos, mechanical drawings, maps, floorplans, logos, signatures and more. From black and white and color originals. ThunderScan reproduces them at over 200 dots per inch and in 32 shades of gray.

ThunderScan's application software, written by Mac-team-member, Andy Hertzfeld, makes it an extremely versatile and useful tool. You can gen-

erate full-page images or selected parts of them. Enlarge and reduce them. Manipulate them. Control the contrast and brightness. Create your own personal image disk. "Cut" and "paste" images together, creating new documents. And print them out on your Imagewriter. Or send them by modem to another Mac. The possibilities are nearly endless.

***No lights, no camera, just action.***

What you see here is the complete ThunderScan system. You don't have to buy an expensive video camera. Just pop out your Imagewriter's ribbon cartridge, snap in ThunderScan and you're set. It can even work in the dark (maybe you can think of an application for that).

If you bought a Mac at least partly for its graphics, only to find you couldn't take full advantage of them, now you can. With ThunderScan.

At an introductory price of just \$229, it's a small price to pay for a whole new graphics capability.

For more information or a ThunderScan of your own, see your dealer or call us today.

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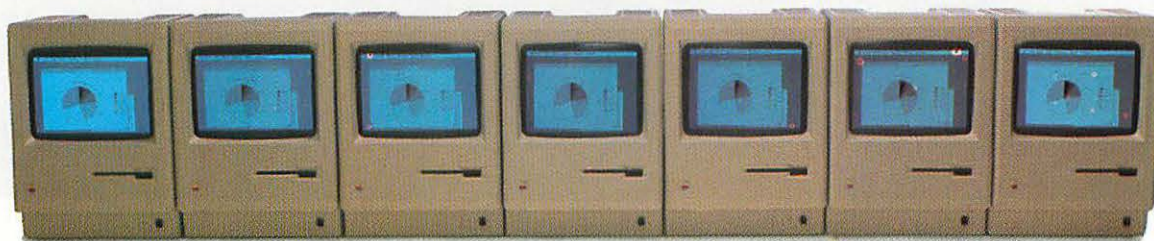


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# Get Info

**Lon Poole**

## *Macworld's tutor answers questions about the Finder, printing, and the keyboard*

*Get Info answers questions about the Macintosh and how it works. Most inquiries deal with application programs, but no topic is too elementary or too advanced. Discussions range from setting up the Mac to programming in BASIC and Pascal. So when you need advice about using the Mac, drop me a line. I cannot respond to individual letters, but I will answer the most representative questions.*

What are those blank, featureless icons that sometimes haunt the desktop? Where do they come from? Where do they go? The answers lie with the Finder.

Also this month, the Finder lets you solve another riddle: how to print a series of documents at one time. And remember how easy it was on a typewriter to turn the paper sideways and type lengthwise on a page? One reader wonders if a way exists to do the same thing on a Mac. Another reader used the Set Startup feature of the Finder several months ago and has been happily bypassing the desktop ever since. Now he wants to bring back the desktop but can't figure out how to do it. And a couple of people have stumbled upon a quirk that makes the keyboard generate characters at an uncomfortably rapid rate. Finally, a reader from Norway has some advice for a reader from Chicago about the correct placement of the external disk drive.

### **Printing Broadside**

**Q.** I am trying to print a certificate wider than an 8½- by 11-inch piece of paper. On a typewriter I simply insert the paper crosswise in the platen. Is there any way to print extra-wide documents on the Macintosh?

*H. W. Abraham  
Fort Lauderdale, Florida*

**A.** Choosing Page Setup from the File menu in most Mac applications lets you use a dialog box to pick a paper size and page orientation. Typically the application can adjust the printed document to fit four paper sizes. In addition you usually have

three page orientation options: Tall, Tall Adjusted, and Wide. For the sideways printing you want, in which the top line of the document runs along the long edge of the page, choose Wide orientation. With Wide orientation you feed the paper in normally (not crosswise), and the Imagewriter prints sideways.

A few programs that have the Page Setup feature are *MacWrite*, *Word*, *ThinkTank*, *Multiplan*, and *Helix*. *MacPaint*, however, lacks Page Setup. To print a *MacPaint* document sideways, you must draw it sideways. A part of a *MacPaint* drawing that can be created only upright, such as text, can be selected with the marquee and then rotated sideways by choosing Rotate from the Edit menu.

### **Low-Profile Chain Printing**

**Q.** I would like to print four or five small documents in succession rather than one at a time. Do you know a way to "chain" print using *MacWrite*?

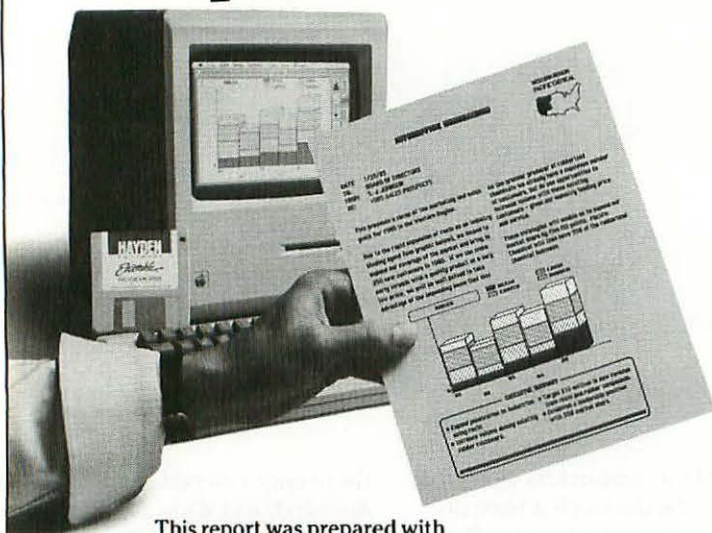
*Patt Chase  
River Forest, Illinois*

**A.** The Finder can instruct an application program to print a series of documents directly from a directory window, a folder window, or the desktop. You can even chain documents created by different application programs.

Select the documents you want printed by enclosing a group of icons with the desktop's marquee or by holding down



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This report was prepared with Ensemble. It integrates text, numbers and graphics. It's more interesting. It's more persuasive. It's more memorable.

You've been expecting big things from Macintosh. You knew that one day your Macintosh would improve your productivity and your performance. That day is here. Together, a Macintosh computer and Ensemble software deliver all the ease-of-use, processing power and graphic capabilities business people need to excel.

## Ensemble means business.

Hayden's Ensemble is the first integrated business software package for the Macintosh. Armed with Ensemble, even a 128K Macintosh is a serious business computer.

Ensemble combines Graphics, Database Management, Report & Form Design, Word Processing, and Calculations in one powerful and productive program. You'll have every tool you need to communicate facts, figures or concepts.

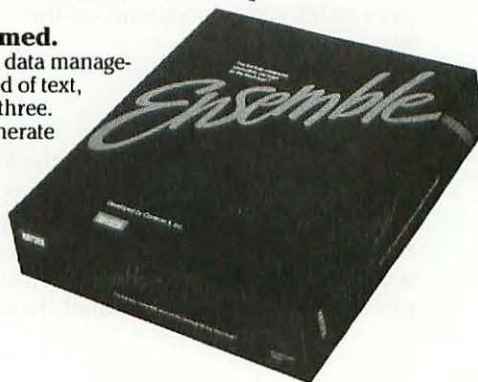
Best of all, Ensemble is as easy to use as a Macintosh. Ensemble was developed specifically for Macintosh (in either a 128K or 512K configuration) and takes full advantage of its pull down menus and graphic user interface. And Ensemble is compatible with MacWrite™ and MacPaint™ too.

Working with Ensemble is like working with a document in front of you on your desk. The document can be a memo or a letter, a form for viewing records in a database, a worksheet that automatically makes calculations, a three-dimensional graph, a picture, or any combination of these elements.

For example, with Ensemble you could draft an analysis of market trends, support your findings by inserting a worksheet, illustrate a critical comparison with a three dimensional bar graph, highlight your conclusions by creating a border around them and dramatize your recommendation with art work you design especially for the report.

## Ensemble keeps you better informed.

With Ensemble, you have an unlimited data management resource. Create a database composed of text, numbers, graphics or a combination of all three. Perform sorts, selections, retrievals and generate custom reports with ease.



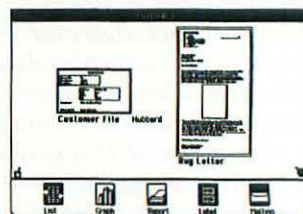
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Net Sales	1,250	250	250	1,750	4,500
Cost of Goods	2,250	1,750	1,750	1,750	8,500
Profit	1,000	800	800	1,000	3,400



You can design your own "customized" spreadsheet formats with Ensemble. And a variety of calculation options are available including: all arithmetic, logical, and comparative functions.

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**Carson**  
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**Citrus Heights**  
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**Concord**  
Micro-Flash  
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**Dana Point**  
Computer Unlimited

**Dublin**  
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Computique

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Sun Computers

**Monterey**  
ComputerCraft

**Mountainview**  
ComputerCraft

**Newark**  
ComputerCraft

**Newport Beach**  
Home Computer Store

**North Ridge**  
H.W. Electronics

**Oakland**  
ComputerCraft

**Oceanside**  
Wabash Computers

**Orange**  
Inacom Computer City  
Wabash Computers  
Software Junction

**Palo Alto**  
ComputerCraft

**Pasadena**  
Inacom Computer City  
Software Central  
Computique

**Pleasanton**  
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Inacom Computer City  
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ComputerCraft  
Computer Selection  
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Software Galleria  
Software Centre  
International

**San Jose**  
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Computer Plus  
Software Emporium  
Software Galleria

**San Leandro**  
Home Computing Center

**San Mateo**  
ComputerCraft  
Micro-Age

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Computique  
Home Computer Store

**Santa Clara**  
Affordable Computer  
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**Santa Rosa**  
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## Get Info

the Shift key as you click on several icons. Then choose Print from the desktop File menu. The Finder opens the appropriate application for each selected icon and tells the application to print the document. The application needed to print each document must be present on one of the disks currently loaded in the Macintosh's disk drives.

### Machine-Gun Repeating

**Q.** DDDDDDeeeeeeeeeaaaaaarrrrr  
LLLLLooonnnnn,,,

The above is an example of what happens when I start to type after inserting any disk on which the keyboard touch and repeat rate are both set to 0 in the Control Panel. Instead of no repeat, I get too much. I can temporarily solve this problem by changing the repeat rate from 0 to 4 and back to 0 again. After that it's fine until the next time I start up the disk.

Where in the system does this strange behavior come from, and what can be done, if anything, to fix it?

*Boyd Kendall*

*Los Alamitos, California*

**A.** You and several others have discovered the undocumented Macintosh "feature" that Richard L. Voit of Chapel Hill, North Carolina, aptly calls "machine-gun repeating." Setting the repeat rate, touch, or both to 0 should disable keyboard repeat until you reset the rate or touch. It shouldn't matter what disks you eject and insert or whether you restart the Mac.

All the Control Panel settings and some other settings are kept in a dedicated section of RAM that's kept alive by the clock battery when the AC power is off. The battery-powered RAM contains the settings in a highly compressed form that is difficult to access. So every time you start up the Mac, programs built into read-only memory (ROM) transfer the settings to a part of regular RAM in a more accessible form.

When you restart the Mac, a quirk in one of the ROM programs changes the meaning of 0 settings for repeat rate or

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touch. After restarting, a repeat rate of 0 means "repeat at top speed" instead of "never repeat," and a touch setting of 0 means "repeat instantly" instead of "never repeat."

You can partially circumvent the machine-gun repeat feature by setting the repeat rate to 1 and the touch to 0. Setting the keyboard touch to 0 disables keyboard repeat until you restart the Mac. Restarting reinstates repeating but at a tolerably slow speed, thanks to the repeat rate of 1. To disable keyboard repeat again, move the keyboard touch setting out of the 0 position and then back into the 0 position.

### Undo Startup Application

**Q.** When I first began working with *MacWrite*, I decided to use the Set Startup command to have *MacWrite* automatically start up when I insert the *MacWrite* disk. How do I undo that?

*Matthew DeMarco*  
Philadelphia, Pennsylvania

**A.** To change your disk so it starts up at the desktop instead of in *MacWrite*, make the Finder the startup application. To do that, get to the desktop by quitting *MacWrite*. From the desktop open the System Folder and select the Finder icon. Then choose Set Startup from the Special menu.

### Stacking Disk Drives

**Q.** The external disk drive takes up a lot of room sitting next to the Macintosh. I've noticed that the cable on my external drive is just long enough so that I can put the drive on top of my Mac. I've also noticed that a lot of heat comes out the top of the Mac, though, and wondered if putting the drive up there would harm anything.

*Dot Green*  
Chicago, Illinois

**A.** You can reduce the amount of table space the external drive occupies by setting it on its side. The drive should work reliably in that position, though inserting disks sideways does take some getting used to. Placing the external drive atop the Mac is risky; Tom Gilb of Kolbotn, Norway, relates his experience:

To save desk space, I tried putting my external drive on top of the Mac, figuring that since it didn't block the air vents, no harm would be done. Then my four boys,

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## Get Info

who all use the Mac for schoolwork and recreation, began to accuse one another of destroying their personal disks. Things got quite heated until I discovered that after the Mac had been on for a long time, the heat coming up toward the external drive was making their disks unreadable.

At first I thought the disks were permanently damaged, but when the drives cooled down and the external drive was placed back on the table, we managed to read the disks. So in spite of the temptation, keep the external drive off the top of your Mac.

## Generic and Name-Brand Icons

**Q.** When I press ⌘-Shift-3 to take a snapshot of the Macintosh's screen in any application program except *MacPaint*, the Screen 0 document shows a blank icon. Later, when I copy the icon to my *MacPaint* disk and use *MacPaint* to work on some other document, the blank icon looks like a *MacPaint* document. Could you please explain what determines how an icon looks?

Joan Nichols  
Hartford, Connecticut

**A.** The Finder is responsible for drawing icons on the desktop, but it contains images only for the folder, the Trash, the system document, a generic application, and a generic document. The Finder does not contain images for the unique icons that most application programs and documents use. An application such as *MacWrite* or *MacPaint* contains the icons for itself and for the documents it creates.

To understand how the Finder assigns icons, you need to know how a document and an application program are linked. Each document and application program has two hidden attributes—four-letter codes called the Creator and the Type—that tell the Finder which icon to use. An application program's Creator attribute is a unique code such as MPNT, and its Type code is always APPL. A document's Creator attribute specifies which application program contains its icon. A document's Type attribute specifies which icon to use.

The Finder assigns icons in a logical way. It retrieves icon images for all the application programs and documents on a disk when you insert the disk. Rather than

repeat the process every time you insert the disk, the Finder copies the icon images it retrieves into an invisible document called the Desktop file. Whenever the Finder encounters a document for which it cannot find a matching Creator application, it searches the Desktop file for another document of the same Creator and Type and uses that document's icon. If the Finder cannot find a matching application or document, it substitutes its generic document icon, which looks like a blank page with the right corner folded over.

If you copy a generic document icon to a disk that contains a matching application and open the application, the Finder replaces the document's generic icon with the correct one. With a two-drive Mac, the Finder replaces a generic icon on one drive with the correct icon from the other drive when you open the matching application.

A document's Creator and Type attributes do more than tell the Finder where to find the document's icon. The Creator attribute identifies which application the Finder must use when opening or printing the document from the desktop. For example, double-clicking on a document with Creator MACA opens *MacWrite*, which in turn opens the document. A document's Type attribute tells an application what type of information the document contains. Also, an application uses a document's Type attribute to determine whether it can open the document or not. For example, *MacWrite* can open a document only of Types WORD (a regular *MacWrite* document) and TEXT (a text-only document, without character styles or formatting rulers). In contrast, *MacWrite* cannot open Type PNTG, which denotes a *MacPaint* document.

*Send your questions about the Macintosh, Mac applications, and Mac programming to Get Info, Macworld, 555 De Haro St., San Francisco, CA 94107. Send electronic mail to CompuServe 70370,702 or The Source BCW440.*

*Lon Poole is a Contributing Editor of Macworld.* □



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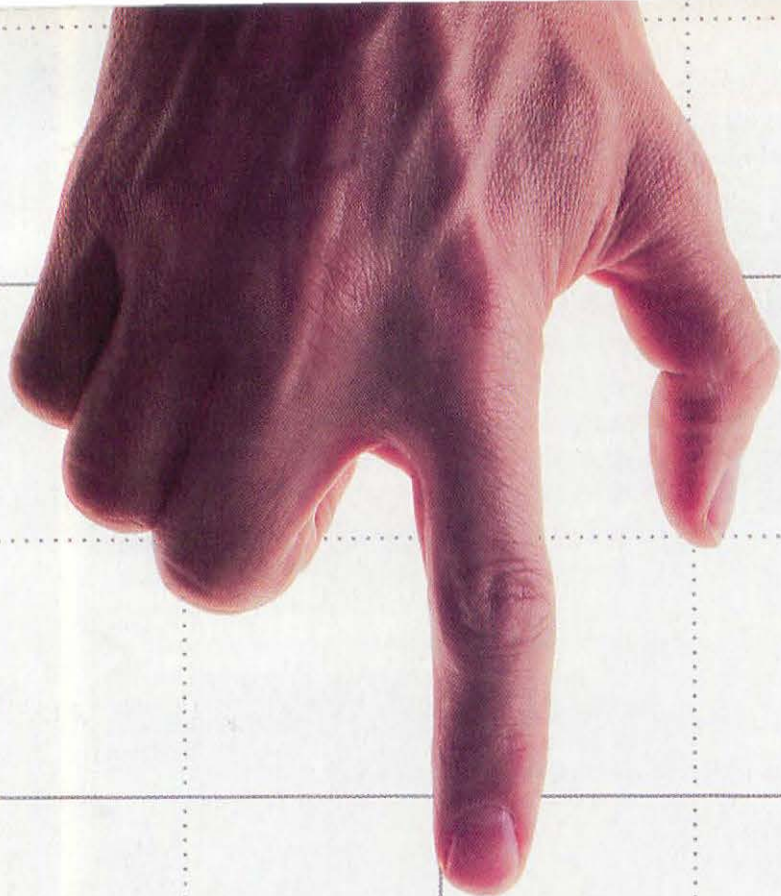
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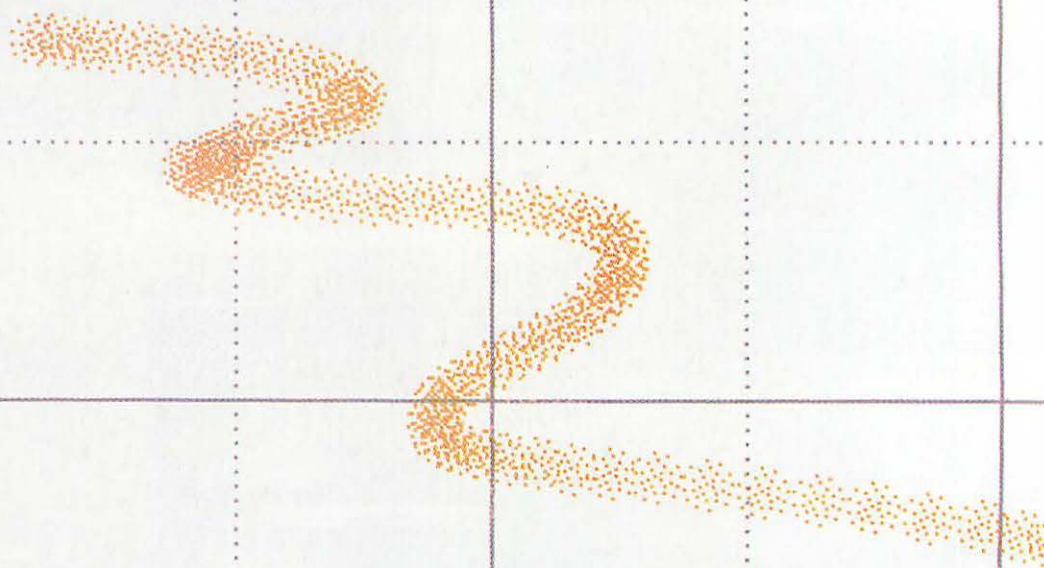
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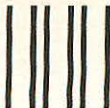
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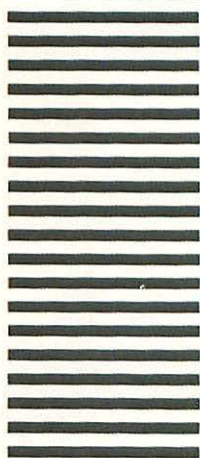
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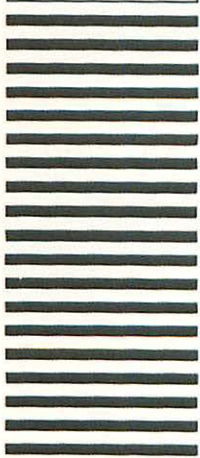
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Smartmodem 1200 (RS-232)	\$ 599	\$ 419
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HUMAN EDGE, Mind Prober	\$ 50	\$ 29
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Think Tank 512K	\$ 245	\$ 139
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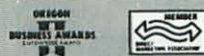
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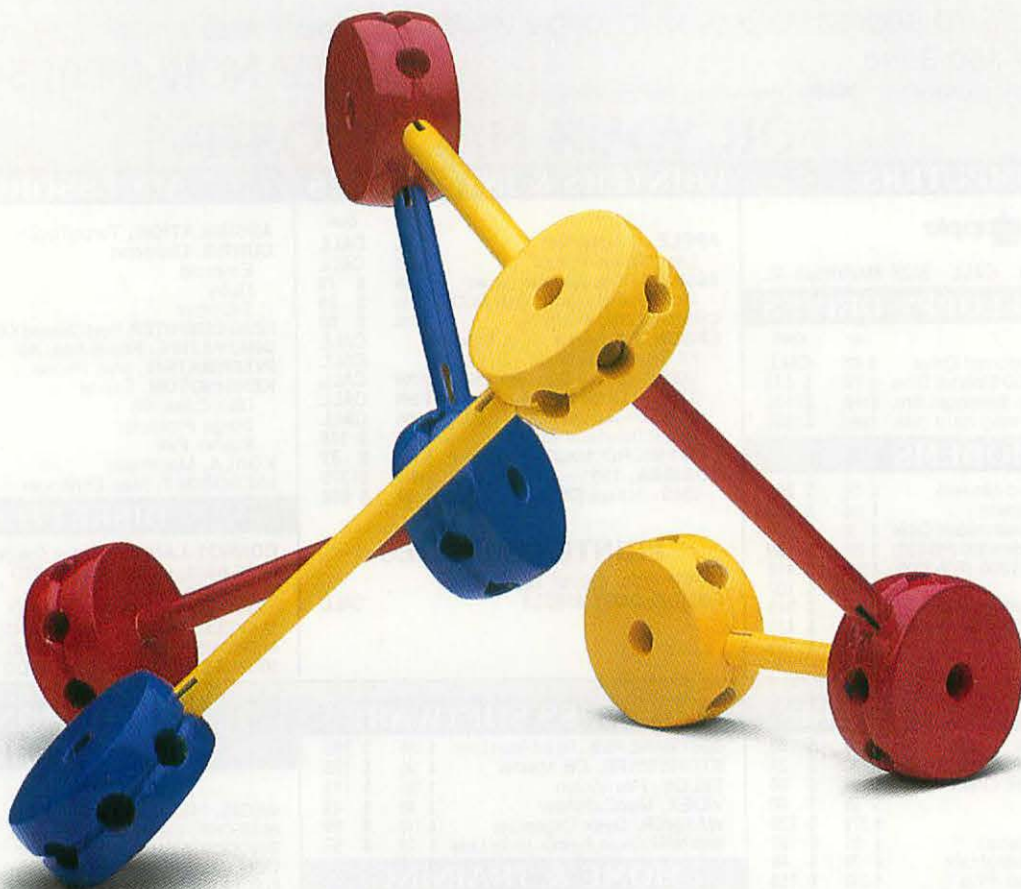
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- 5. Scientific Calculator:** Replaces existing calculator with full function scientific calculator to perform square root, exponential calcs, etc. (results may then be pasted directly into working document).
- 6. Statistics:** Calculate mean, median and standard deviation of a list of values and graph results. Prints all results.
- 7. Internal Rate of Return:** Calculate internal rate of return of periodic payments received over period of years.
- 8. Bond Yield to Maturity:** Calculate Bond Yield to Maturity.
- 9. Calendar Functions:** Calculate days between dates, day of week of future date, date of number of days hence, etc.
- 10. Desk Accessories Editor:** Allows user to edit desk accessories and install Financial or Scientific Calculator.

## ProPrint™ \$99.00

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- Underlining
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- Superscript
- Headers/Footers
- Page Breaks
- Line Justification; left, right, centered and full
- Subscript
- Tabs; Decimal Tabs
- Ribbon Color Change
- Proportional Spacing

#### Easy To Use, Yet POWERFUL:

- Completely Mouse driven; no keyboard interaction
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- Automatically loads and prints up to 50 files sequentially
- Automatically defaults to user's most recent printer configuration upon start up

#### Flexible Options:

- Multiple copies option
- Single sheet or continuous feed
- Wide selection of printer operating parameters
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ProPrint supports the following serial printers:

Amdak	NEC
AppleDaisyWheel	Qume
Brother	Silver-Reed
C. Itoh	Star PowerType
Comrex	Toshiba
Daisywriter	Transtar
Diablo	TTX
Dynax	
H.P. LaserJet	

...and compatibles

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- 4. Banner Maker:** Make large banners for birthdays, anniversaries, parties, retirement or any special occasion.
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- 6. Home Inventory Record:** Provides format for recording and categorizing personal effects.
- 7. Stock Record:** Provides convenient format for recording stock sales and purchases, calculating gains and losses and determining long or short term nature of transactions.
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- 9. New Puzzle for Desk Accessories:** Provides advanced puzzle to be inserted in place of existing puzzle.
- 10. Desk Accessories Editor:** Allows user to edit desk accessories and install Financial Calculator, Puzzle and Alarm Clock.

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The bottom of the advertisement features a stylized illustration of a document. On the left, there is a Union Jack flag. To its right is a large red rectangle. Further right is a yellow rectangle. On the far right, there is a white document with a financial table. The table has columns for 'ITEM', 'AMOUNT', and 'DATE'. The rows include 'Interest', 'Total', 'Interest Rate', 'Purchase Date', 'Period of Lease', 'Total Interest', and 'Months Remaining'. The values are: Interest \$120.00/yr, Total \$320.00/yr, Interest Rate 12.00%, Purchase Date JAN 10 83, Period of Lease 5 (Number of years), Total Interest (Over period of 5 years) \$120.00, and Months Remaining 5 (Number of months).

ITEM	AMOUNT	DATE
Interest	\$120.00/yr	
Total	\$320.00/yr	
Interest Rate	12.00%	
Purchase Date	JAN 10 83	
Period of Lease	5 (Number of years)	
Total Interest	\$120.00	
Months Remaining	5 (Number of months)	



# POWERFUL DATABASE IN AMERICA.

C	O	M	P	A	R	E
Comparison:	PFS File/Report	Microsoft File	OMNIS 2	MacLion	Helix	OMNIS 3
Relational/Hierarchical†	NO	NO	NO	only relat'l	only relat'l	YES†
Multi-user, with record locking	NO	NO	NO	NO	NO	YES
User Defined:						
-Pull-down Menus	NO	NO	NO	NO	NO	YES
-On Screen Button Commands	NO	NO	NO	YES	NO	YES
-Messages/Command Sequences	NO	NO	NO	YES	NO	YES
Password Security	NO	NO	YES	NO	NO	YES
Open/Available Files	1/1	1/1	1/1	14/150	"Unlimited"*	12/24
Fields per Record	3,100	1,024	120#	350	"Unlimited"*	1,440#
Numeric/Date Calc's	Report only/No	YES/NO	YES/YES	YES/YES	YES/YES	YES/YES
Mail Merge	NO	NO	YES	YES	YES	YES

†Hierarchical file links can make handling of data faster and simpler. #Plus 60 additional temporary fields for each data entry & report format.  
 \*Numerically unlimited, but performance constraints do apply.

Note: Information for this chart was obtained directly from the companies involved.

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Circle 38 on reader service card

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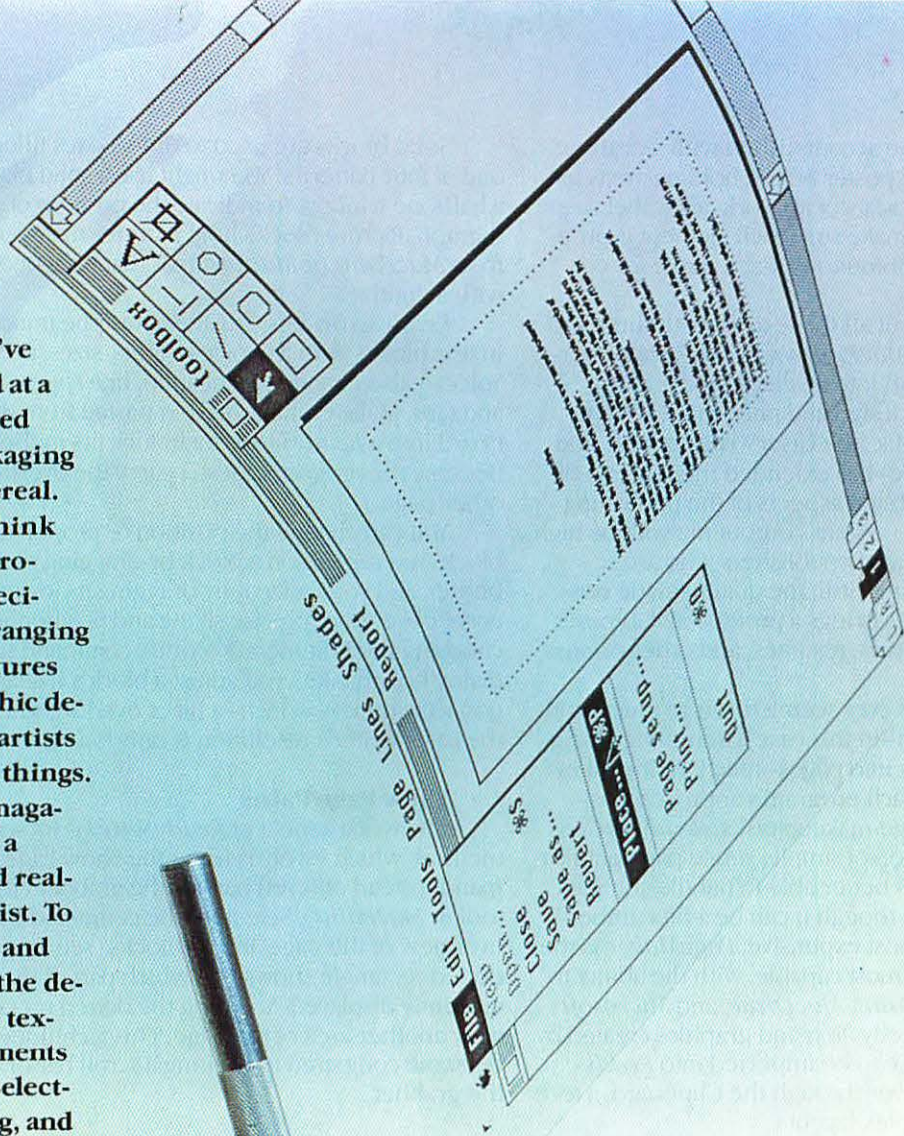


# Publishing Turns an Electronic Leaf

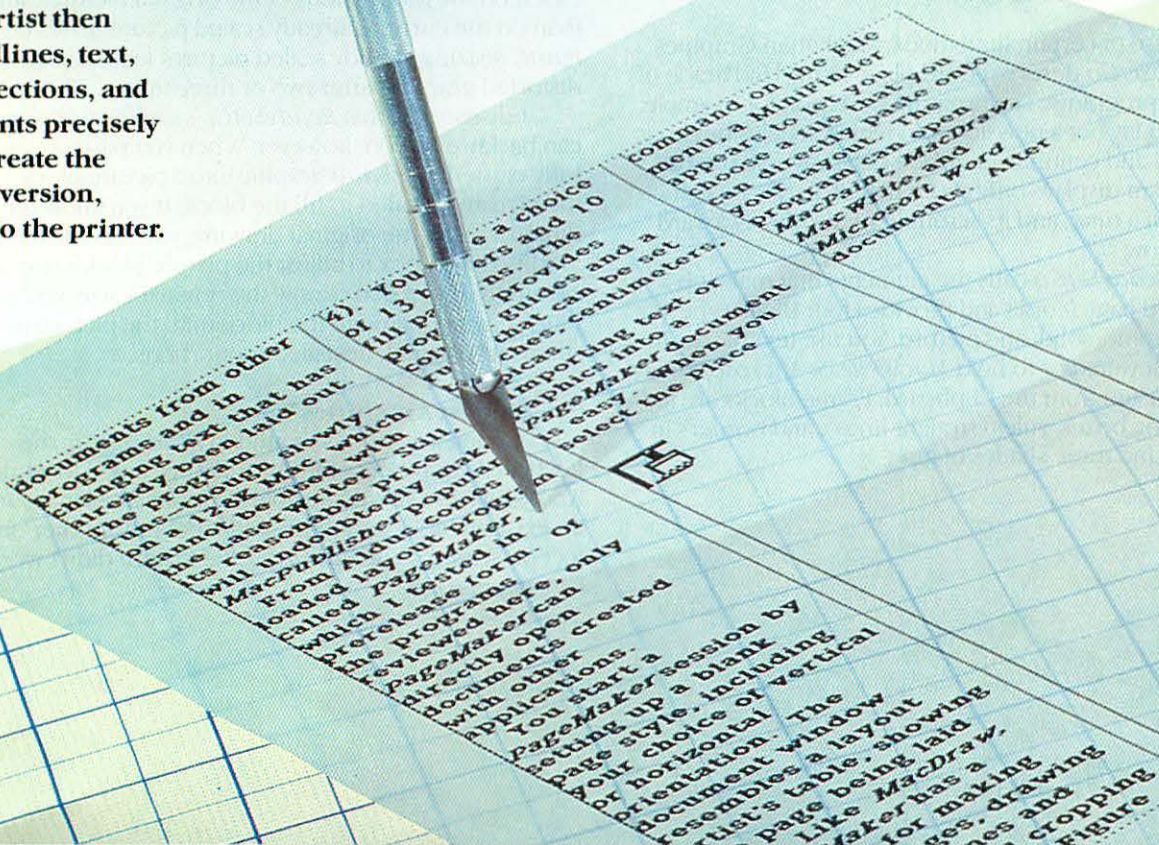


Countless times you've read a book, glanced at a magazine ad, or stared aimlessly at the packaging on your breakfast cereal. You probably don't think about the complex processes and careful decisions involved in arranging those words and pictures before you. But graphic designers and pasteup artists do think about such things.

Each page of this magazine was planned by a graphic designer and realized by a pasteup artist. To create an expressive and harmonious whole, the designer integrates the textual and graphic elements in the magazine by selecting, arranging, sizing, and combining. Initially, a draft layout of each page, called the dummy, is prepared. The pasteup artist then glues the headlines, text, captions, corrections, and graphic elements precisely into place to create the camera-ready version, which is sent to the printer.



*Danny Goodman*





Design and pasteup are accomplished with a drafting table covered by thick poster board, holding areas for typeset text and photostats of artwork, a parallel ruler and right triangles to make sure each element is properly aligned, and the ubiquitous X-acto knife for cutting in corrections.

You can do without all those tools with three programs—*ReadySetGo*, *MacPublisher*, and *PageMaker*—that turn the Macintosh into an electronic drafting table. The Macintosh design and publishing system—composed of a 512K Mac, the LaserWriter printer, and page-makeup software—has extended the low end of the typesetting and design aspects of the publishing industry. However, the system's output may not be high enough in quality to satisfy publishers who are accustomed to typesetting. Still, the quality made possible by those products brings a professional, typeset look to newsletters, flyers, résumés, and other printed materials.

I can't remember ever seeing three products with a common application—in this case assembling Macintosh text and graphics into pages—reach their goal in such different ways. Each program's approach positions it for specific page-makeup tasks. *ReadySetGo* is suited to the production of simple, single-page publications. *MacPublisher* is better able to handle complex, multiple-page layouts, though it can be a bit cumbersome. Although the most expensive, *PageMaker* is the easiest to use and the most capable, with the ability to read *MacWrite*, *MacPaint*, *MacDraw*, and *Microsoft Word* documents directly. Text and graphics created by other applications have to be imported into *ReadySetGo* and *MacPublisher* through the Clipboard, a tedious process in complex layouts.

## ReadySetGo

Because of certain limitations, Manhattan Graphics' *ReadySetGo* deserves third place in my Hit Parade of three programs. The program does not, for example, let you lay out a newsletter in which articles begin on page 1 and continue on inside pages. Worse yet, the program displays only about half of an 8½- by 11-inch page at a time, and its scrolling method is awkward and slow.

*ReadySetGo* calls the elements that make up a printed page *blocks* and provides four block types: text, frame, solid, and picture. You use text blocks to type new text or to hold *MacWrite* or *Microsoft Word* text pasted from the Clipboard. Frame blocks are for drawing boxes, rules (straight lines), and borders in black and three shades of gray.

Solid blocks are used to draw boxes filled in with one of four patterns. You might use a solid black box as a halftone window to indicate the position of a photograph. Picture blocks hold pictures that you paste from *MacPaint* or *MacDraw* or that have been created with a digitizer.

*ReadySetGo* lets you alter the appearance of text in text blocks with a choice of fonts, sizes, and styles. You can also change justification, line spacing, indents, and tabs. Make certain that text pasted from the Clipboard into a *ReadySetGo* text block fits in the block, because the program doesn't carry the overflow to another page.

You can change the position or proportions of any block. You reposition a block by dragging the upper border, and you resize it by dragging its lower-right corner. For more precise sizing and positioning, choosing the Edit menu's Modify command displays a dialog box that lets you adjust a block's size and location to within 1/10,000 inch—a bit of overkill, since even the LaserWriter's resolution is only 1/300 inch.

### Show Page Pains

The worst aspect of *ReadySetGo* is its scrolling method, which involves using the Show Page command instead of scroll bars or the grabber (the hand tool in *MacPaint*). Selecting the command calls up an overview of the page and its blocks (see Figure 1). A dotted rectangle shows you which part of the page is currently displayed. You drag the dotted rectangle to view another area of the page. This technique is cumbersome compared to clicking a scroll bar or dragging the grabber.

### Picture This

*ReadySetGo* lets you resize a picture block and see the results immediately. Any further resizing is based on the proportions of the original picture rather than on the current, already scaled picture. In *MacPaint*, resizing already scaled pictures leads to highly distorted graphics after two or three times.

I discovered that *ReadySetGo*'s scaling technique can backfire on you, however. When you paste a carefully crafted *MacPaint* graphic into a picture block, the picture is scaled to fill the block. If you know the dimensions of the original drawing, you can use the Modify dialog box to adjust the picture block's size accordingly. If you don't know the original's size, you must repeatedly resize the block until the picture resumes its original, unscaled proportions.

### Modest Amenities

Among a few bugs I found in *ReadySetGo*, the keyboard equivalents for Cut and Copy failed to work. And while you should be able to draw a border around an existing block and then send it behind another object on screen as in *MacDraw*, the feature didn't work.



In sum, *ReadySetGo* adds only a few benefits to *MacDraw*'s page layout capabilities: a precise measurement system, tab-setting in text blocks, and the ability to resize blocks and immediately see the results (see "Late-Night Layout" in this issue). The program's price tag seems high for those modest amenities, and I expect a 512K-only program like this one to offer better scrolling methods and layout capabilities for multiple-page documents.

## MacPublisher

In some ways using *MacPublisher* is like working at an actual drafting table because of the way the screen is laid out. Text and graphics are held in windows on the left half of the screen. To lay them out, you drag the elements from the windows to the dummy on the screen's right side (see Figure 2). Each block is represented on the dummy by a rectangle sized to the proportions of the article or picture. If the rectangle is large enough, it contains the name of the article or picture and specifications about its size. An arrow is displayed when text is continued on or is continued from another column or page. Page and column numbers indicating where the rest of the text is located are also displayed.

A *MacPublisher* document is called an issue; each issue contains up to 32 pages. The text in an issue is divided into articles, each of which has a name and is stored as a file. You type or edit text in an article window, where you choose the column width, font, size, and style for each article. Unfortunately, you can't change font, size, or style without affecting the entire article. If you want a headline to appear in a larger size

than the story, you must type and format the headline as a separate article. This inability to change type style within text—to emphasize a word, for example—is a serious limitation in a page-makeup program.

*MacPublisher* offers condensed or wide print, with less or more space between characters, and adjustable leading, or space between lines of text. *MacPublisher* justifies text by adding spaces between letters as well as between words to fill out a line, the way typesetters do.

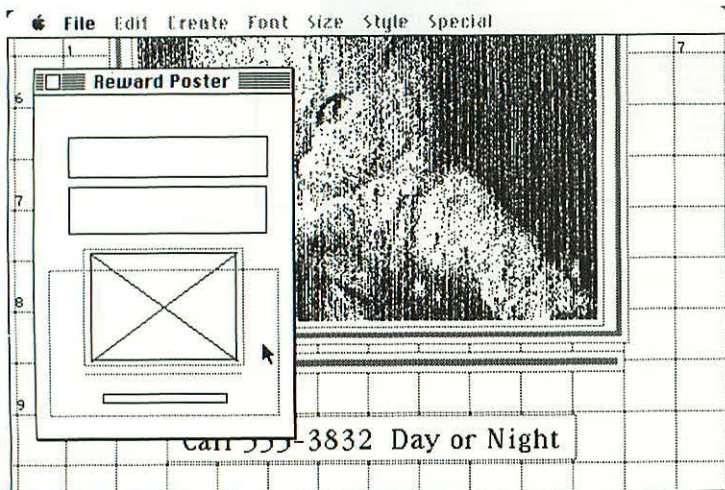
### Cameras and Rulers

You add pictures to a *MacPublisher* issue by using the Clipboard and a desk accessory called the Camera, which functions like a transparent window over the Clipboard window. By adjusting the camera cursor, you can crop the image and then "snap" its picture, transferring the selected image to a picture window; from there the picture can be dragged to the dummy.

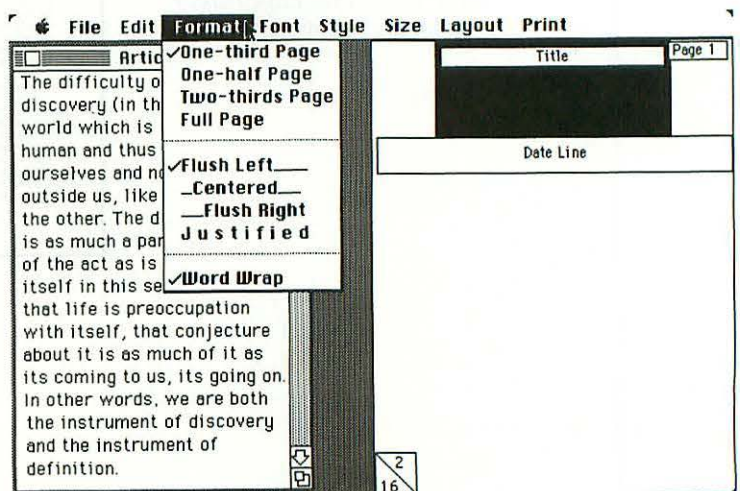
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Aligning blocks on the dummy is made easy by *MacPublisher*'s layout guides, which automatically position columnar material against invisible margins. A free-form option lets you place blocks wherever you want, and each block can have its own column format.

(continues on page 76)



**Figure 1**  
Scrolling a single-page ReadySetGo document requires using the Show Page command. Since no grabber or scroll bars are provided, you must drag the viewing rectangle around the overview window to see another part of the page—a time-consuming and disruptive procedure.



**Figure 2**  
*MacPublisher* features a dummy on the right half of the screen and windows of text and graphics that you select and drag to the dummy. Text can be automatically sized to preformatted column widths or sized manually using the size box.



# The Pace of a Page

**Adrian Mello**

Meeting deadlines is crucial in the world of publishing, and the decision to replace a drafting board and traditional layout tools with an electronic page-make-up system may ultimately depend on the electronic system's ability to save time as well as money. Consequently, page-make-up programs should be judged not only by their features but also by the time they take to lay out and print documents.

To judge the performance of *ReadySetGo*, *MacPublisher*, and *PageMaker*, we designed a sample page and measured the time each program required to lay out and print the page. The table entitled "Page-Makeup Olympics" shows the results of the test, which was performed on a 512K Macintosh with an external disk drive and a LaserWriter printer.

The results show significant differences in speed among the three programs. *PageMaker* was far and away the winner

	Layout Time	Printing Time	Total Time
ReadySetGo	16:33	5:44	22:17
MacPublisher	8:17	4:48	13:05
PageMaker	2:31	3:05	5:36

## Page-Makeup Olympics

Each program was used to lay out and print the same pre-designed page. Layout time did not include the time required to make revisions.

## ReadySetGo

Although *ReadySetGo* scales graphics, part of the MacPaint picture is missing because the program imports documents through the Clipboard; the size of graphics that can be copied from MacPaint is limited by the size of the MacPaint window. Unlike *MacPublisher* or *PageMaker*, *ReadySetGo* provides no way to carry an overflow of text to another page or window.

original picture rather than on the current, already scaled picture. In *MacPaint*, resizing already scaled pictures leads to highly distorted graphics after two or three times. I discovered that *ReadySetGo*'s scaling technique can backfire on you, however. When you paste a carefully crafted MacPaint graphic into a picture block, the picture is scaled to fit the block. If you know the dimensions of the original drawing, you can use the Modify dialog box to adjust the picture block's size accordingly. If you don't know the original's size, you must repeatedly resize the block until the picture resumes its original, unscaled proportions.

### Modest Amenities

Among a few bugs I found in *ReadySetGo*, the keyboard equivalents for Cut and Copy failed to work. And while you should be able to draw a border around an existing block and then send it behind another object on the screen as in *MacDraw*, the feature didn't work.

In sum, *ReadySetGo* adds only a few benefits to *MacDraw*'s page layout capabilities: a precise measurement system, tab-setting in text blocks, and the ability to resize blocks and immediately see the results (see "Late-Night Layout" in this issue). The program's price tag seems high for those modest amenities, and I expect a 512K-only program like this one to offer better scrolling methods and layout capabilities for multiple-page documents.

### MacPublisher

In some ways using *MacPublisher* is like working at an actual drafting table because of the way the screen is laid out. Text and graphics are held in windows on the left half of the screen. To lay them out, you drag the elements from the windows in the dummy on the

screen's right side (see Figure 2). Each block is represented on the dummy by a rectangle sized to the proportions of the article or picture. If the rectangle is large enough, it contains the name of the article or picture and specifications about its size. An arrow is displayed when text is continued on or is continued from another column or page. Page and column numbers indicating where the rest of the text is located are also displayed.

A *MacPublisher* document is called an issue; each issue contains up to 32 pages. The text in an issue is divided into articles, each of which has a name and is stored as a file. You type or edit text in an article window, where you choose the column width, font, size, and style for each article. Unfortunately, you can't change the font, size, or style without affecting the entire article. If you want a headline to appear in a larger size than the story, you must type and format the headline as a separate article. This inability to change type style within text—to emphasize a word, for example—is a serious limitation in a page-make-up program.

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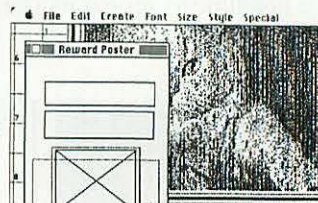
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Aligning blocks on the dummy is made easy by *MacPublisher*'s





because of its flexibility and powerful features. *PageMaker*'s speed was even more evident when layout time was measured alone. Printing time is affected by the way each program stores the information that it sends to the LaserWriter.

The test doesn't reflect the time the programs take to make changes because the sample page was based on a *Macworld* page that had already been designed. A layout artist usually moves text and graphic elements around on a dummy page to find the most pleasing arrangement. *PageMaker* automatically adjusts to any change you make to the layout, such as changing the depth or width of a column. You wait only for the program to recalculate the effect of a change on one or more pages. With the other programs you have to reposition every element affected by the change. Furthermore, the difficulty of making changes with *MacPublisher* and *ReadySetGo* is exacerbated by the repeated cutting and pasting necessary to position text and graphics taken from source documents. While *PageMaker* adjusts to a change in seconds, the other programs could easily take several minutes to effect the same change.

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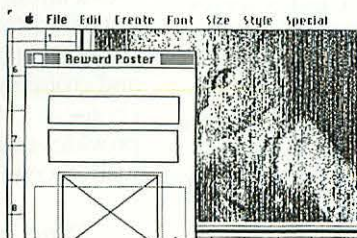
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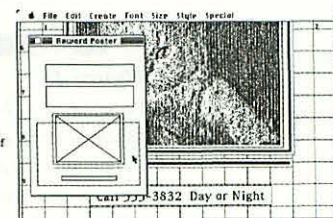
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## MacPublisher

*MacPublisher doesn't allow you to mix type styles or sizes within a text block. The bottom and right sections of the picture were cut off because like ReadySetGo, the program cannot import MacPaint graphics larger than the MacPaint window. Text was cut off at the right margin when we used MacPublisher's three-column format on the LaserWriter.*

## PageMaker

*Of the three programs, PageMaker is the easiest and most efficient to use. The program gives you complete control over column widths, and the Place command allows you to import text and full-page graphics directly into the program from other applications. The picture was scaled to fit in the given space.*



(continued from page 73)

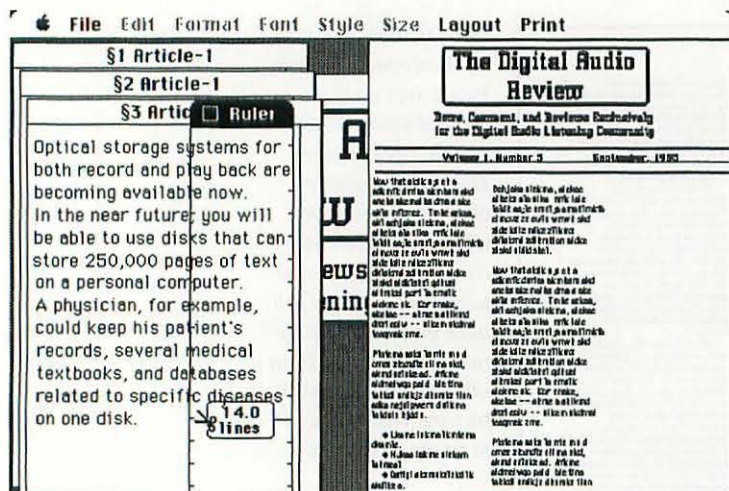
Therefore, you can center a headline in free form and set the rest of the page in two or three columns. Aligning separate elements into nonstandard columns, however, isn't easy because precise measurement or normal-size view options are unavailable.

Making major corrections to text that has already been laid out can be tedious, especially if the text extends over several columns and pages. Corrections must be done to text in the article window, not on the dummy. If you delete a sentence from the first column, the balance of the article's text that is found in other windows does not automatically move up to fill the space. And if you need to edit a small block of text, the rectangle on the dummy is too small to display the name of the article containing the text. You may have to search your article files to find the one to edit.

### Indexing and Printing

After you've laid out an issue, *MacPublisher* can generate an index. In complete form the index serves as a map of the issue, since it gives information about the location of all elements. An edited index can be used as a table of contents.

For a mixture of electronic and mechanical layout, *MacPublisher* allows you to print out text on the Imagewriter in high quality and enlarged 133, 150, or 200 percent. The printouts can be photostatted down to normal size, pasted up by hand, and sent to a print shop. The resulting quality is much sharper than direct Imagewriter output.



**Figure 3**  
MacPublisher's ruler aids you in determining the depth of text columns in lines, inches, or pixels before you select and drag text to the dummy with the scissors pointer. Carryover text is automatically placed in another section of the same article. The work area to the left can become cluttered with the elements going onto a page.

### Complicated but Capable

*MacPublisher* is suited for the production of newsletters or other simple publications in columnar format, despite the difficulties in importing documents from other programs and in changing text that has already been laid out. The program runs—though slowly—on a 128K Mac, which cannot be used with the LaserWriter. Still, its reasonable price will undoubtedly make *MacPublisher* popular.

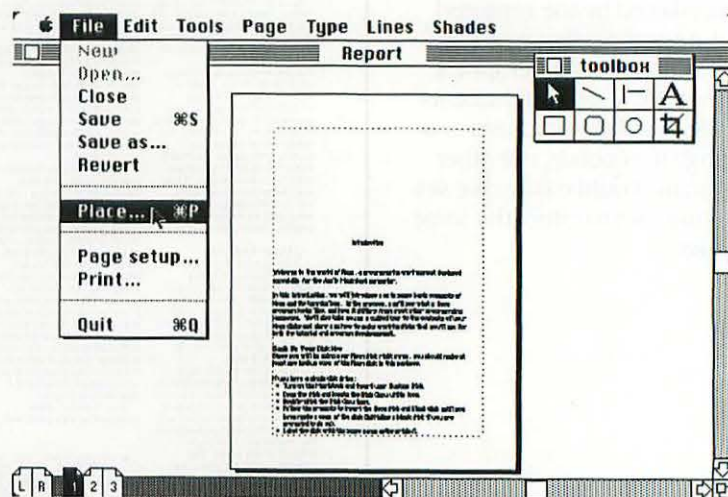
## PageMaker

From Aldus comes a loaded layout program called *PageMaker*, which I tested in prerelease form. Of the programs reviewed here, only *PageMaker* can directly open documents created with other applications.

You start a *PageMaker* session by setting up a blank page style, including your choice of vertical or horizontal orientation. The document window resembles a layout artist's table, showing the page being laid out. Like *MacDraw*, *PageMaker* has a toolbox for making text changes, drawing dividing lines and borders, and cropping graphics (see Figure 4). You have a choice of 13 borders and 10 fill patterns. The program provides column guides and a ruler that can be set to inches, centimeters, or picas.

### Type Layout

Importing text or graphics into a *PageMaker* document is easy. When you select the Place command on the File menu, a MiniFinder appears to let you choose a file that you can directly paste onto your layout. The program can open *MacPaint*, *MacDraw*, *MacWrite*,



**Figure 4**  
*PageMaker*'s Place command lets you select text or pictures for placement in a *PageMaker* layout. Icons in the lower-left corner show that double-sided pages have been selected and that three pages have been assembled. The Toolbox window presents a palette of drawing and editing tools. The area surrounding the page is a holding area where text and graphics can be placed temporarily.



and *Microsoft Word* documents. After *PageMaker* opens a document, the pointer turns into a special text or graphics pointer. Clicking the pointer at the desired starting spot on the page places the imported document there.

If the document is lengthy text, the text fills the column until the bottom margin, where an icon resembling a window-shade pull shows a plus sign to indicate more text. When you click the plus sign, the pointer takes the rest of the text, which you can paste onto as many additional pages as needed. This feature is among *PageMaker*'s best, greatly simplifying the layout of multiple-page publications.

When you add a page, an icon appears near the lower-left corner of the screen, showing not only the page number but also whether the page is a right- or left-hand page. Publications are limited to 16 pages. If you add or delete text or graphics, *PageMaker* adjusts the rest of the article, even if it appears on other pages.

Another *PageMaker* feature lets you reduce text or graphics to 50 or 70 percent of actual size or expand the material to 200 percent for precise placement. In addition, the Reduce to Fit command puts the entire layout on screen. All functions, including text editing, work at any viewing size.

If you want to cut an element from one page onto another, drag it to the holding area around the page, select another page, and drag the element onto the new page. By dragging column guides and repositioning text, you can even flow text around a graphic element, which normally takes careful measurement and tedious typesetting (see Figure 5). Headers and footers must be manually inserted from *MacWrite* or *Microsoft Word* files, but page numbering, if desired, is automatic.

## Professional's Choice

*PageMaker* is elegant because it works feverishly behind the scenes to protect you from concerns such as adjusting the flow of text across several pages. Unlike *MacPublisher*, the *PageMaker* screen remains remarkably clutter-free, even while you assemble a complex document. A professional layout artist would feel at home with *PageMaker*, yet it's simple enough for almost anyone with a layout task to use quickly and productively.

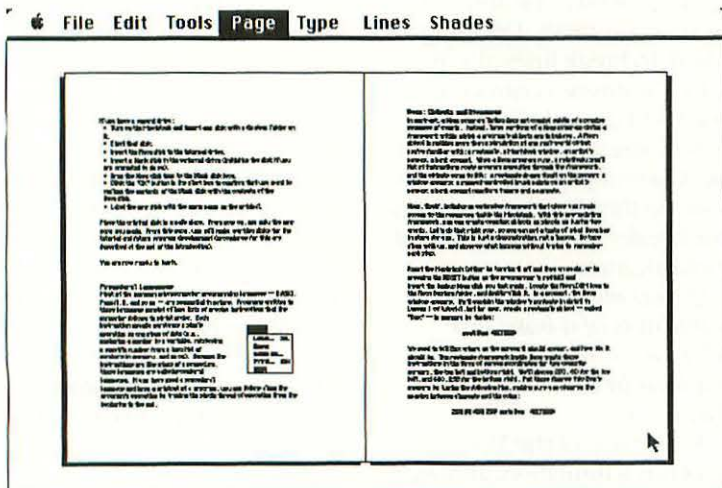
## Stop the Presses

If I were shopping for page-makeup software on a limited budget, I could learn to live with *MacPublisher*'s screen clutter and other inconveniences, but I'd be lusting after *PageMaker*. Of course, you first have to decide whether you should be in the market for such software at all (see "What's Fit to Print"). This complicated decision depends on several interrelated factors.

The first question to consider is the quality you require. *ReadySetGo*, *MacPublisher*, and *PageMaker* are designed primarily for page makeup; they are not typesetting software and cannot do sophisticated text formatting—not yet anyway. For example, none performs automatic hyphenation, which is needed for professional-looking full-justified columns. And none of the programs allows kerning, the adjustment of specific letter spaces to avoid gaps or overlaps.

Two other factors to consider are the size of your publication and the number of copies you print. In general, as the cost of typesetting rises in proportion to the total production cost, designing and printing with the Macintosh become more appropriate. For example, a small newsletter with a large circulation has typesetting and pasteup costs that are insignificant compared to total printing costs. In this case you wouldn't save much money with the Macintosh system. On the other hand, a 16-page financial newsletter mailed to only 100 subscribers may be worth producing on the Mac.

The economics of publishing vary considerably depending on how the Macintosh is incorporated into the production process. For example, if you use the Mac with a LaserWriter printer solely to eliminate typesetting, it would take four years—producing a typical monthly newsletter of 200 column inches, or eight pages—to pay off your investment in a 512K Mac, a LaserWriter, and page-makeup software. On the other



**Figure 5**  
When you select double-sided pages, *PageMaker* lets you view the layout of a two-page spread with the *Show Facing Pages* command on the *Page* menu. A click of the mouse button returns you to the layout window.



## What's Fit to Print

**Edited by J. E. Arcellana**

*Macworld* Editor Kearney Rietmann asked the magazine's Art Director Bruce Charonnat and Production Editor James Felici about the potential of page-makeup software for the Macintosh. The programs, which enable you to use the Mac for the electronic pasteup of text and graphics, are the software component of Macintosh publishing—the design and printing system that includes the 512K Mac and the LaserWriter printer. Excerpts from their discussion follow.

*Q. What does the Macintosh need to become a system for producing Macworld?*

A. Page-makeup programs have both typesetting and pasteup functions. The strength of currently available programs is the pasteup function—the placement of text and graphic elements on a page—rather than the typesetting function, which controls typographical features such as indentation, justification, line breaks and hyphenation, and the spacing between letters, words, and lines. While proportional spacing is available, no program offers kerning or effective control over interletter spacing. Kerning is the adjustment of space between particular combinations of letters. For example, a capital Y next to a capital A spells *trouble* with a capital T because of the large area that is

opened up. Professional typesetting software should be able to kern that space, to bring the letters closer together.

Line spacing, on the other hand, is not a serious limitation in Macintosh layout. Traditionally, line spacing on personal computers has been based on typewriter standards. Typesetting machines use a much finer scheme, some of them controlling line spaces in  $\frac{1}{10}$ -point increments at 72 points per inch. But the Mac is getting closer to what we need, with programs that allow you to control line spaces in 1-point increments. That's good enough for most commercial publications, including *Macworld*.

In order to set professional type you have to be able to hyphenate it. Hyphenation and end-of-line decisions are partly based on a dictionary with from 20,000 to 50,000 words, which the Mac just doesn't have disk storage space for. A dictionary works best on a system with a hard disk and the processing speed to be able to refer to it constantly. Deciding where to break lines also involves aesthetic controls so you don't end up with lines that are grossly stretched out, for example. Current page-makeup software on the Mac doesn't handle line breaks with that degree of sophistication.

*Q. You mentioned the usefulness of a hard disk. What are some other considerations in terms of hardware?*

A. The size of the Mac's screen is a limitation, although its resolution is high enough for our purposes. Right now we

would love to have a Mac with an 8½- by 11-inch, full-page vertical screen, which would really help the design process. It should also have at least a megabyte of RAM and a faster microprocessor than the Motorola 68000, because the machine would have to keep track of a phenomenal amount of graphic information on the bigger screen. With the professional typesetting programs it could run, such a Mac would be a powerful text and graphics machine that would find widespread acceptance in the publishing industry.

*Q. How would the LaserWriter printer be used in that system?*

A. The true value of the LaserWriter to commercial publishing is as a proofing device. You check proofs produced on the LaserWriter until they're exactly right and then send them out once to be typeset. True typeset quality won't be available on the LaserWriter until it reaches a resolution that is at least three times greater than it is now. The LaserWriter isn't a printing press, either. That's something a lot of people don't understand. It's an office machine. If you want 50 copies, the LaserWriter is great. If you want 50,000 or 500,000 or 5 million copies, go to a print shop. Five hundred copies is on the cusp.

*Q. What kind of publications do you see people producing with the Macintosh?*

A. Modest ones like newsletters, small posters, programs,



exhibition notes, price lists—materials that aren't necessarily going to have a long shelf life. Most of the items would be throwaways. For example, you might go to an art gallery and receive a two-page handout, folded or not, with a descriptive list of the pieces in the exhibit and short biographies of the artists. LaserWriter publications are not materials that people are apt to save. We wouldn't try to sell anything designed and printed using the Mac, the LaserWriter, and one of the currently available page-makeup programs. In our opinion, a commercial-quality publication can't yet be produced with a Mac.

*Q: How can people take the best advantage of the Mac's current design and publishing capabilities?*

A. You have to remember not to put too much on a layout. Don't make it too busy. If you can't see the whole layout on screen, print it out and make an actual dummy. Look at the publications you like, study them, and try to get the look that they have.

Avoid fully justified copy, since the available software can't fill out a line nicely. Ragged right works best. Use wide columns so that the right margin appears less ragged than if you used narrow columns. Avoid setting too many elements off with boxes and rules because of the imprecise line spacing that results.

hand, publications with small circulations could be printed cost-effectively with the LaserWriter each month. For an even cheaper option, small print runs could be accomplished with photocopied Imagewriter printouts.

The system that's best for you also depends on the equipment you already own or can use for other purposes. The strength of personal computer systems is that they can be used for any number of office tasks in addition to page makeup. While an entry-level typesetting system costs only a few thousand dollars more than the hardware and software required for Mac publishing, the typesetting system cannot manage a database or perform calculations on a spreadsheet.

As word processors have undermined the typewriter's traditional territory, electronic layout tools may eventually replace the drafting table and X-acto knives. Keep in mind, however, that page-makeup programs don't prevent you from creating unattractive layouts. If anything, those programs place a burden on Macintosh owners to master not only the content of a message but also the design principles that get the message across with the most impact and in the best taste. □

◆◆◆◆◆◆◆◆◆◆ *Danny Goodman*  
*is a Contributing Editor of Macworld.*

◆◆◆◆◆◆◆◆◆◆  
*ReadySetGo*  
*Manhattan Graphics*  
*163 Varick St.*  
*New York, NY 10013*  
*212/989-6442*  
*List price: \$125*

*MacPublisher*  
*Boston Software*  
*19 Ledge Hill Rd.*  
*Boston, MA 02132*  
*617/327-5775*  
*List price: \$99.95*

*PageMaker*  
*Aldus Corp.*  
*616 First Ave. #400*  
*Seattle, WA 98104*  
*206/467-8165*  
*List price: \$495*



# We're short

## Out of stock? Out of mind?

Five score and a month or so ago, MacConnection entered the brand new Macintosh market with the claim that we would never advertise a product until it was on our shelves. That's because we didn't, and still don't want you to get all excited about some snazzy software or hardware solution that is delayed, or never gets out of the manufacturer's door. Too many products are announced that just don't appear. So when you see a product on our list you know that it's available and we've checked it out.

Occasionally, we are indeed out of stock of an existing product. Why? Usually one of two reasons. Either there is a new version coming and we think you're better off waiting for it. Or, favorable publicity has caused us to sell something faster than we expected. If we run out of a product, rest assured, we'll get it to you as fast as possible, and can usually give you a pretty firm delivery date.

By the way, we're still sending a complimentary copy of the Macintosh Buyer's Guide to everyone who places an order totalling over \$50.

## SOFTWARE

### Ann Arbor Softworks

Animation Toolkit 1 ..... \$36.  
Create, edit, and animate pictures.

### Apropos

You must have Multiplan to use.

Tax Planner ..... 35.  
Personal tax preparation.

Financial Planning ..... 65.  
Home budget, tax, auto, life insurance.

Investment Planning ..... 65.  
Stocks, real estate, loans, IRA vs. CD's.

### Arrays/Continental

Home Accountant ..... 61.  
Financial planner for your Mac.

External drive required with 128k Mac.

### Assimilation Process

Mac-Tracks ..... 23.  
Store up to 5000 characters on any one key.

Lock-It ..... 23.  
Limit access to your files.

Mac-Memory-Disk ..... 23.  
Access more memory in your 512k Mac.

Mac-Spell-Right ..... 59.  
Requires version 3.3 or later of MacWrite.

### Axlon

Art Portfolio ..... 37.  
120 drawings await your creative desires.

Card Shoppe ..... 37.  
Make professional quality greeting cards.

### Computer Software Design

MacLion ..... \$219.  
Relational database manager.  
External drive recommended.

### Creative Solutions

MacForth - Level 1 ..... 89.  
MacForth - Level 2 ..... 139.

Level 2 includes an assembler,  
floating point, and advanced graphics.

### Desktop Software

1st Port ..... 55.  
Communicate with other micros,  
mainframes, and public data bases.

1st Merge ..... 55.  
Data-entry and mailmerge, labels.

1st Base ..... 105.

### Dilithium Press

PC to Mac & Back ..... 89.  
Communication between IBM PC and Mac.

### Dow Jones

Straight Talk ..... 49.  
Information services at your fingertips.

Spreadsheet Link ..... 61.  
Must have Multiplan, modem and  
Dow Jones Straight Talk.

Market Manager PLUS ..... 125.  
Track portfolio information.

### EnterSet

QuickSet ..... 65.  
Icon-driven true accessory with powerful  
calculations.

### 1st Byte

Smooth Talker ..... 89.  
Voice synthesis software for the Mac.

### Forethought

Factfinder ..... 89.  
Free-form entry.

### Harvard Associates

MacManager ..... 32.  
Business simulation.

Desktoppers ..... 32.  
Four new desk accessories.

### Hayden Software

DaVinci Buildings ..... 31.  
DaVinci Interiors ..... 31.

DaVinci Landscapes ..... 31.  
DaVinci Building Blocks ..... 46.

DaVinci Commercial Interiors ..... 120.  
I Know It's Here Somewhere ..... 39.

Get organized with this foolproof filer.

Musicworks ..... 46.  
Hayden:Speller ..... 47.

For MacWrite and Microsoft Word.

Score Improvement System for the SAT ..... 59.  
College entrance-exam study guide.

Ensemble ..... 179.  
Database, calculations, graphics and more.

### Hippopotamus Software

Edit, compile, link, and execute C  
programs.

Hippo-C - Level 1 ..... 117.  
Hippo-C - Level 2 ..... 297.

### Human Edge Software

Mind Prober ..... 31.  
The Communications Edge ..... 113.

The Management Edge ..... 129.  
The Sales Edge ..... 149.

The Negotiation Edge ..... 179.

### Kensington

Graphic Accents ..... \$33.  
250 professional illustrations, business  
to holiday themes.

Professional Type Fonts for Text ..... 33.  
12 to 24 point fonts.

Professional Type Fonts for Headlines ..... 45.  
24 to 72 point fonts, requires 512k.

### Layered

Front Desk ..... 89.  
For organizing and scheduling your  
most important activities.

### Linguist's Software

Tech ..... 75.  
Over 1000 symbols for scientific equations.

MacGreek Plus ..... 75.  
Includes special symbols for Bible studies.

MacHebrew ..... 75.  
Text reads left to right.

MacKana/Basic Kanji ..... 75.  
Includes 70 of the most common Kanji.

MacGreek/Hebrew/Phonetics ..... 129.  
Includes all extra symbols of  
phonetic alphabet.

### Living Videotext

ThinkTank 128k ..... 77.  
ThinkTank 512k ..... 129.

### Magnum

McPic - Volume I ..... 31.  
McPic - Volume II ..... 31.

The Slide Show Magician ..... 38.

### Manhattan Graphics

ReadySetGo ..... 89.  
Interactive page makeup, requires 512k.

### Mark of the Unicorn

Professional Composer (requires 512k) ..... 289.  
Create performance quality sheet music.

### MegaHaus

Megamerge ..... 75.  
Megafiler ..... 119.

Megaform (requires 512k) ..... 175.  
Design your own invoice, order forms,  
and more.

### MicroLab

Tax Manager ..... 115.  
Examine different tax strategies.

### Microsoft

Entrepreneur ..... 32.  
Competitive simulation of the software  
industry.

Chart ..... 75.  
Basic (version 2.0) ..... 92.

Multiplan ..... 119.  
File ..... 119.

Word ..... 119.  
Business Pack ..... 389.

Includes Word, File, Chart, and Multiplan.

### Miles Computing

Mac the Knife - Volume 1 ..... 25.  
Mac the Knife - Volume 2 ..... 29.

### Monogram

Forecast ..... 45.  
Tax planning program.

Dollars & Sense ..... 82.

### Northwest Analytical

NWA StatPak ..... 279.  
Statistical analysis, requires Microsoft  
Basic.

### Organization Software

Omnis 2 (requires external drive) ..... 139.



# M A C M O D E R N E

## SHORT PEOPLE.

It's sure not easy being only 4½" tall. And having a name like Isidor Shud. And a nickname like "Goofus." And spending your whole life on a shelf. And being perpetually stuck in the year 1952. But it's a lot more fun since our landlady, Ellen Klages, got a Macintosh.

You see, Ellen's a fairly normal person with a fairly normal job as a proofreader, who lives in a fairly normal apartment in Oakland, CA. But her Mac has sent her deep into a twilight zone of micro interior design.

When my family first moved in, Ellen had only a kitchen set up for us. It was nice, but shucks, I wanted a room of my own, and the folks needed a little privacy themselves.

Ellen just couldn't find wallpaper, curtains, and upholstery for a family of our stature (or lack thereof) and our historical niche (the 1950's).

## HAPPY TRAILS TO YOU.

Then out of the blue of the western sky came MacPaint! (And an Imagewriter Printer with heat transfer ribbons.) Suddenly there was no end to the designs Ellen could create for us on paper and fabric. We got real live imitation linoleum for our floors! I got my very own room with Hopalong Cassidy wallpaper! Mom got pink curtains with atomic age graphics! Dad got an "I like Ike" bumper sticker for his 1952 Nash!

But the real corker was the miniature vintage *Vault of Horror* comic Ellen made me with colored printer ribbons and a little hand-tinting. It's swell.

The Macintosh has opened new worlds for my family, boy oh boy. The Shuds are keeping up with the Joneses now. Be seeing you.



"Our Connection? Mac Connection."  
The Shud family—living forever in the 1950's. Clay sculptures by Sandra Pongor. Interior decorating by Ellen Klages on her Mac.



Linoleum pattern and "hopalong" wallpaper for the Shud family. Printed from MacPaint and hand colored.



  
**MacConnection**™

14 Mill Street, Marlow, NH 03456 1-800/Mac&Lisa or 603/446-7711

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Circle 4 on reader service card



# n service.

<i>Infidel (advanced)</i> .....	\$29.
<i>Suspect (advanced)</i> .....	29.
<i>Sorcerer (advanced)</i> .....	29.
<i>Deadline (expert)</i> .....	31.
<i>Starcross (expert)</i> .....	31.
<i>Suspended (expert)</i> .....	31.
<i>Invisiclus (hint booklets) are available for any Infocom games. Specify game.</i> .....	7.

## Mark of the Unicorn

<i>Mouse Stampede</i> .....	23.
<i>Highly addictive.</i>	

## McCarron-Dial Systems

<i>McFlip</i> .....	21.
<i>Mac version of Reversi.</i>	
<i>McTrivia</i> .....	24.
<i>Animated trivia game.</i>	

## Miles Computing

<i>MacAttack</i> .....	29.
<i>3-dimensional tank simulation.</i>	

## Mirage

<i>Trivia (new low price)</i> .....	19.
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## Penguin

<i>Transylvania</i> .....	24.
<i>The Quest</i> .....	24.
<i>Pensate</i> .....	24.

*You can control the obstacles, but can you make it to the top of the grid?*

## Priority Software

<i>Forbidden Quest</i> .....	27.
<i>A truly challenging sci-fi adventure.</i>	
<i>Gateway</i> .....	29.
<i>Sci-fantasy adventure.</i>	

## Scarborough Systems

<i>Run for the Money</i> .....	32.
<i>Best with 2 players.</i>	
<i>Make Millions</i> .....	32.
<i>Enter the world of high finance.</i>	

## Screenplay

<i>Trivia Arcade</i> .....	27.
<i>Sports, music, TV, science, and general.</i>	

## Sierra On-Line

<i>Frogger</i> .....	27.
<i>Ultima II</i> .....	37.
<i>The ultimate fantasy role-playing adventure.</i>	

## Silicon Beach Software

<i>Airborne!</i> .....	21.
<i>Works with either 128k or 512k Mac.</i>	
<i>Superb sound and graphics.</i>	

## Soft-Life Corp.

<i>Mac-Slots</i> .....	29.
<i>An electronic slot machine. Includes Keno.</i>	

## Vindex

*Collection of familiar, entertaining, and challenging games.*

<i>Funpak</i> .....	23.
<i>MacCheckers/Reversi</i> .....	29.
<i>MacGammon/Cribbage</i> .....	29.
<i>MacVegas</i> .....	35.

## HARDWARE

### Assimilation Process

<i>Mac-Daisywheel-Connection</i> .....	75.
<i>Mac-Turbo-Touch</i> .....	89.

### Compuable

<i>Mac to Hayes Smartmodem cable</i> .....	17.
<i>Mac to Epson FX/RX printer cable</i> .....	17.

### Cuesta Systems

<i>Datasaver AC Power Backup</i> .....	call
<i>Keeps Mac operating during line power interruptions or brownouts. 90 watts.</i>	

## Curtis Manufacturing

### SURGE SUPPRESSORS

*All surge suppressors have an on/off switch.*

<i>Diamond (6 outlets)</i> .....	\$33.
<i>Emerald (6 outlets; 6 ft cord)</i> .....	43.
<i>Sapphire (3 outlets; EMI/RFI filtered)</i> .....	53.
<i>Ruby (6 outlets; EMI/RFI filtered; 6 ft cord)</i> .....	63.

## Epson

*All Epson printers have built in graphics capability. In addition, the "Plus" printers can print in near letter quality (NLQ) with the addition of the NLQ parallel or serial option.*

<i>RX-100</i> .....	call
<i>FX-80 Plus</i> .....	call
<i>FX-100 Plus</i> .....	call
<i>JX-80</i> .....	call
<i>LQ-1500 (letter quality dot matrix)</i> .....	call

## Hayes Microcomputing

<i>Smartmodem 300</i> .....	149.
<i>Smartmodem 1200</i> .....	429.
<i>Compuable's Mac to Smartmodem cable</i> .....	17.

## IOMEGA

<i>Bernoulli Box</i> .....	1397.
<i>5-megabyte storage for your Mac.</i>	
<i>5-meg Cartridge</i> .....	39.
<i>Head Cleaning Kit</i> .....	69.

## Kensington

<i>Mac Dust Cover</i> .....	10.
<i>Imagewriter Cover</i> .....	10.
<i>Universal Printer Stand</i> .....	19.
<i>Swivel</i> .....	23.
<i>Disk Case (holds 36 Mac disks)</i> .....	23.
<i>Surge Suppressor</i> .....	35.
<i>Starter Pack</i> .....	54.
<i>Control Center</i> .....	65.
<i>Modem (300 baud)</i> .....	99.

## Koala Technologies

<i>MacVision</i> .....	229.
<i>Digitize pictures or objects for reports, projects for use with video camera or other video source.</i>	

## Microcom

<i>MacModem</i> .....	399.
<i>Upgradeable to 2400 baud.</i>	

## Microsoft

<i>MacEnhancer</i> .....	165.
<i>Additional ports and terminal software.</i>	

## Suprex Business Software

<i>MacSpeak</i> .....	15.
<i>External speaker for your Mac.</i>	

## Systems Control

<i>MacGard</i> .....	59.
<i>Surge and static protection, provides two outlets.</i>	

## DISKS

### Innovative

<i>Flip &amp; File (Holds 40 Mac disks)</i> .....	23.
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### Pacific Wave

<i>Flip Sort Micro (Holds 40 Mac disks)</i> .....	12.
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### BASF

<i>Disks 3 1/2" Micro Floppy (Box of 5)</i> .....	18.
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### Verbatim

<i>Disks 3 1/2" Micro Floppy (Box of 10)</i> .....	28.
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### Sony

<i>Disks 3 1/2" Micro Floppy (Box of 10)</i> .....	31.
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### Fuji

<i>Disks 3 1/2" Micro Floppy (Box of 10)</i> .....	31.
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## Memorex

<i>Disks 3 1/2" Micro Floppy (Box of 10)</i> .....	\$31.
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## MAXELL

<i>Disks 3 1/2" Micro Floppy (Box of 10)</i> .....	31.
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## 3M

<i>Disks 3 1/2" Micro Floppy (Box of 10)</i> .....	35.
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## INFORMATION SERVICES

### Compuserve

<i>Compuserve Information Service</i> .....	19.
<i>Includes subscription, manual, 5 hours of connect time, and monthly publications.</i>	

## MISCELLANEOUS

### American Tourister

<i>Mac Carrying Case (while they last)</i> .....	49.
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### Automation Facilities

<i>Floppyclene (ten cleaning disks)</i> .....	25.
<i>Refill Kit (ten disks)</i> .....	10.

### Computer Coverup

<i>Mac &amp; Keyboard (two covers)</i> .....	10.
<i>Imagewriter Cover</i> .....	8.
<i>Wide Imagewriter Cover</i> .....	8.
<i>External Disk Drive Cover</i> .....	4.

### Diversions

<i>Underware Ribbon</i> .....	11.
<i>Create iron-on transfers of your favorite Mac pictures. T-shirts, banners.</i>	

<i>Underware Color Pens</i> .....	11.
<i>Add colors to your iron-on transfers.</i>	

<i>ColorPack</i> .....	19.
<i>Includes one black ribbon and set of five color pens.</i>	

### Esoft Enterprises

<i>ColorPrint</i> .....	29.
<i>Allows MacPaint documents to be printed in color. Color ribbons not included.</i>	

### I/O Design

<i>Imagewriter Transfer Ribbons</i> .....	10.
<i>Available in black, red, blue and yellow.</i>	

<i>Imageware</i> .....	49.
<i>Padded Imagewriter Carrying Case with shoulder strap. Navy blue.</i>	

<i>Macinware</i> .....	69.
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*Sturdy well-padded bag for the Mac, mouse, drive, keyboard, and accessories. Reinforced bottom.*

### Innovative Technologies

<i>CompuBag</i> .....	59.
<i>Well-padded carrying case for your Mac and accessories. Reinforced bottom.</i>	

<i>Easel</i> .....	15.
<i>Folding diskette holder. Perfect companion with CompuBag, holds 20 disks.</i>	

### Kalmar Designs

<i>Roll-top teakwood disk case.</i>	
<i>(holds 45 disks)</i> .....	19.

### Microsoft

<i>Apple-Mac Book</i> .....	14.
<i>Presentation Graphics Book</i> .....	14.

<i>MacWork/MacPlay Book</i> .....	14.
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### RAEX Enterprises

<i>Mouse-Trap</i> .....	8.
<i>A home for your idle mouse.</i>	

### Ribbons Unlimited

<i>Available in black, blue, brown, green, purple, red, and yellow.</i>	
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<i>Imagewriter Ribbon</i> .....	5.
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<i>Imagewriter Ribbons Six Pack</i> .....	28.
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<i>Imagewriter Rainbow Six Pack</i> .....	28.
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*Includes each color except black.*



# on prices and long o

## Peachtree

Back to Basics General Ledger ..... \$85.  
Entry-level accounting system.

## ProVUE Development

OverVUE ..... 159.  
Database with powerful math capability.

## RealData, Inc.

Real estate and financial analysis templates.  
You must have Multiplan to use.

General financial analysis ..... 75.

Commercial real estate development ..... 75.

Residential real estate ..... 75.

Income producing real estate ..... 95.

On Schedule ..... 130.

Tax Shelter Syndication Analysis ..... 195.

## Software Arts

TK!Solver ..... 149.

An equation processing program.

## Software Publishing

PFS:File ..... 74.

PFS:Report ..... 74.

PFS:File/Report ..... 115.

## State of the Art

Electric Checkbook ..... 49.

Keep your personal finances in order.

## Stoneware

DB Master ..... 119.

Complete database management.

## T/Maker

Click Art Personal Graphics ..... 33.

Click Art Publications ..... 33.

Click Art Letters ..... 33.

Click Art Effects ..... 33.

Rotate, slant, distort and add perspective  
to your MacPaint drawings.

ClickOn ..... 47.

Adds spreadsheet and grapher to  
any application.

## Telos Software

Filevision ..... 102.

Unique graphic filing program.

## Think Educational

Mind Over Mac ..... 36.

Five challenging games.

MacEdge ..... 36.

Learning programs in math and reading.

## Videx

MacCalendar ..... 53.

Includes a reminder system to alert you  
of important messages or notes.

## Warner Software

The Desk Organizer ..... 99.

Complete desk management system.

## TRAINING

### ATI

MacCoach Training ..... \$49.

Teach Yourself Multiplan ..... 49.

### Forethought

Typing Intrigue ..... 33.

Typing instruction that features solving  
a mystery case.

### Palantir

MacType ..... 31.

Supports Qwerty and Dvorak keyboards.

MathFlash ..... 31.

Math flash card drills.

### Scarborough Systems

MasterType ..... 29.

Typing program with arcade action.

### Simon & Schuster

Typing Tutor III ..... 31.

Includes Letter Invaders.

## OUR POLICY

- We accept VISA and MASTERCARD.
- No surcharge added for charge cards.
- Your card is not charged until we ship.
- If we must ship a partial order, we never charge freight on the shipment(s) that complete the order.
- No sales tax.
- All shipments insured; no additional charge.
- Allow 1 week for personal & company checks to clear.
- UPS Next-Day-Air available.
- COD max. \$1000. Cash or certified check.
- 120 day guarantee on all products.\*
- To order, call us anytime Monday thru Friday 9:00 to 9:00, Saturday 9:00 to 5:30. You can call our business offices at 603/446-7711.

## SHIPPING:

**Continental US:** For printers and drives add 2% for UPS ground shipping. Call for UPS Blue or UPS Next-Day-Air. For all other items, add \$2 per order to cover UPS shipping. We will automatically use UPS 2nd-Day-Air at no extra charge if you are more than 2 days from us by UPS ground. **Hawaii:** For printers and drives, actual UPS Blue charge will be added. For all other items, add \$3 per order. **Alaska and Outside Continental US:** Call 603/446-7711 for information.

## GAMES

### Axlon

MacMatch ..... \$31.

Match the squares and solve the  
hidden puzzles underneath.

### Blue Chip

Millionaire (stock market) ..... 37.

Tycoon (commodities) ..... 37.

Baron (real estate) ..... 37.

### BrainPower

Think Fast ..... 29.

Improve your memory.

Chipwits ..... 31.

Create your own robot. No programming  
knowledge required.

TeleChess ..... 41.

Play chess over the phone. Modem  
required.

### Broderbund Software

Lode Runner ..... 26.

Arcade style; attempt to recover stolen gold.

Cyborg ..... 26.

A sci-fi text adventure.

### CBS

Murder by the Dozen ..... 29.

12 intricate mysteries.

### General Computer

Ground Zero ..... 26.

Save the nation from enemy attack.

### Hayden Software

Masterpieces ..... 24.

Turn your favorite drawings into a jigsaw  
puzzle.

Word Challenge II ..... 24.

How many words can you find?

Sargon III ..... 31.

The ultimate in computer chess.

### Infocom

You're a magician challenging the dungeon  
master, a detective solving a murder mystery,  
a scientist deciphering hieroglyphics, or just  
an ordinary mortal meeting the Wizard of Fro-  
bozz. (Difficulty levels shown in parenthesis)

Seastalker (junior) ..... 25.

Enchanter (standard) ..... 25.

the Witness (standard) ..... 25.

Planetfall (standard) ..... 25.

Cutthroats (standard) ..... 25.

Hitchhiker's Guide (standard) ..... 25.

Zork I (standard) ..... 25.

Zork II (advanced) ..... 29.

Zork III (advanced) ..... 29.

1-800/Mac&Lisa 480C

# MacConnection™

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\*Defective software replaced immediately. Defective hardware replaced or repaired at our discretion. Some items have warranties up to five years.

Circle 4 on reader service card



# The Mac Goes Pro Forma

Bill Grout

*Business forms that fill themselves out at the press of a key*

*The paperless electronic office, where paper lands on your desk as rarely as bouquets, appears to be another modern myth. Filling out paper forms will be in fashion long after the police decide to stop handing out tickets or the government gives up the Form 1040 in favor of asking for an annual donation. Although wrestling with paper forms is probably inevitable, a program called MegaForm can at least lend you a hand.*

MegaForm enables you to design forms on the Macintosh screen and helps complete them automatically. The program runs only on the 512K Macintosh and is best suited for forms that you use routinely on the job. Depending on your work, you might design forms such as expense reports, invoices, shipping orders, time sheets, estimates, or even payroll checks and stubs. Designing forms is a two-step process: first you design a form's physical layout, and then you set up the program so that it supplies the required information automatically. Once a form is completed, you can file it away for later review or print copies for distribution.

Well-designed forms should not only help you keep your work organized but also have a professional appearance. MegaForm allows you to embellish forms with graphics—such as a company logo, bold rules, or patterned backgrounds—to give

corporation



11 To:-

forms the well-finished quality associated with preprinted commercial designs. Forms can also include text in any combination of Chicago, Geneva, New York, Monaco, and London fonts, and font sizes can range from 9-point to 48-point. A single-page form can theoretically be as large as 24 by 36 inches, but form size is limited by the printer you use. In the Imagewriter's case, forms are limited by the printer's 10½-inch carriage width. If you use the LaserWriter, forms are limited to legal-size paper. You can design forms for any paper size under 24 by 36 inches, and multiple-page forms can be created.

The process of designing *MegaForm* forms is easy to master, although creating complex forms that have many blanks and text headings can be time-consuming. Drawing forms on the screen is similar to using *MacDraw* or *MacPaint*. You design forms with lines, boxes, and circles, and you fill objects with patterns like those found in *MacPaint* or create your own custom patterns. Although *MegaForm*'s drawing capabilities don't provide *MacPaint* tools like the paintbrush, the paint bucket, or the spray can, you can transfer *MacPaint* images into a form via the Clipboard.

If you don't relish the prospect of creating a form from scratch, you can model *MegaForm* forms after standardized paper forms. However, you need to avoid violating copyright laws.

*MegaForm* comes with a half-dozen ready-made forms that can quickly be modified and used. The sample forms include an invoice, a dry cleaner's receipt, an expense report, and a Form 1040. This selection of ready-made forms probably won't be useful for many businesses. A spokesperson from Megahaus claims that the company will make additional ready-made forms available on CompuServe and The Source and that it also plans to develop disks of forms designed for specific professions.

### The Cell Is Magic

Once you design a form, *MegaForm* helps you complete it by filling in as many blanks as it can. The program calculates figures and provides facts in much the

same way as an electronic spreadsheet does. When a traditional spreadsheet appears on screen, you're presented with a grid of cells into which you place numbers, text, and math formulas. *MegaForm* also has cells; wherever a blank should appear in a form, you draw a rectangular cell large enough to hold the information required. In the sample invoice shown in Figure 1, for example, cells were created to hold such information as customer account numbers, dates, and customer names and addresses.

After you position cells in a form during the layout process, the next step is to define the type of information individual cells will hold and the source of that information (see Figure 2). Cells can receive information from four sources: the keyboard, a formula, a table, or a database file. If a cell's information is to be typed, you define

Ship to:-



the cell's source as the keyboard. A *MegaForm* cell can also use as its source a math formula similar to those used in spreadsheet models. Addition, subtraction, multiplication, and division can be used in cell formulas.

Spreadsheets often have numerous functions such as SUM and AVG, which quickly sum and average the contents of groups of cells. In contrast, *MegaForm* has only five functions. One function provides a date. Two other functions find the minimum and the maximum of two compared figures. Another function puts titles such as "Customer Copy" or "Vendor Copy" on forms. A serial function provides serial numbers that increase as forms are completed, as required for numbered invoices, for example.

Since *MegaForm* limits the number of characters that can make up a single formula, long, complex formulas that refer to a

dozen or more cells are not always possible. Although probably adequate for the math required to complete most forms, *MegaForm's* capabilities remain rudimentary compared to the average electronic spreadsheet.

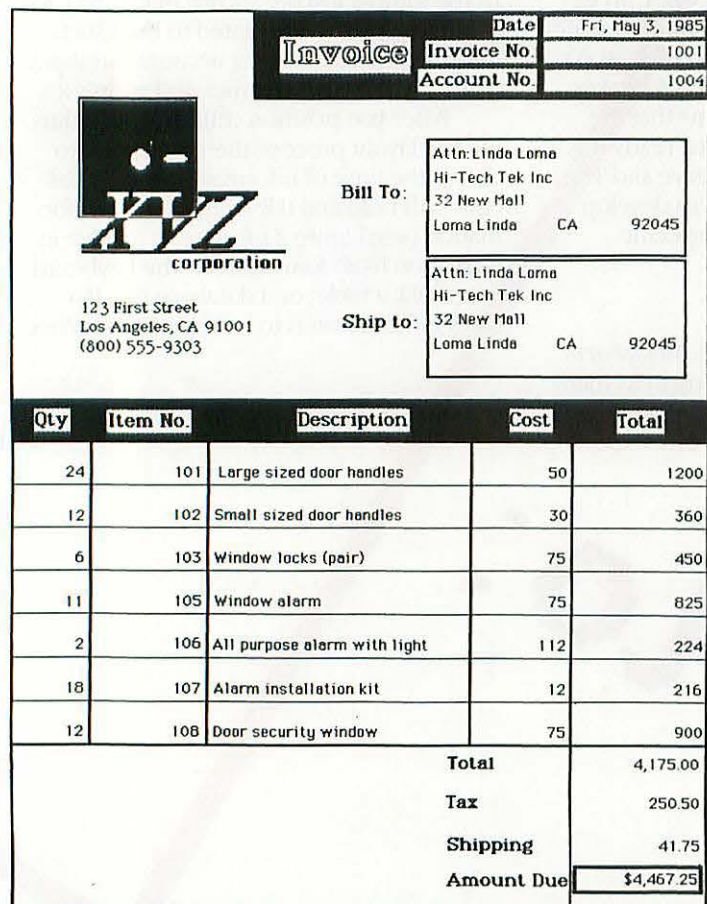
*MegaForm* can also derive information from tables of stored data, which function like the Lookup tables used in many spreadsheets. You might, for instance, compare the amount of a sale to a table of figures and have *MegaForm* select an appropriate customer discount. A selection in one table can even be linked to information in another table. You could set up an invoice form, for example, that would look up sales tax in one table to determine final sale price and then refer to another table to figure out the sales commission.

*MegaForm's* most impressive capability is that it can pull information out of a *MegaFiler* database to complete a form. (*MegaFiler* is the only database program that works with *MegaForm*, however.) This

compatibility enables you to take advantage of information already stored and organized in the database and saves you from having to retype it in a form. When you define a cell, you tell *MegaForm* which database file to refer to, which field to use to locate a particular record, and what information to retrieve. Thus, you can direct a cell to look up a customer's name in a database and automatically retrieve the customer's address. A single form can draw information from any number of database files.

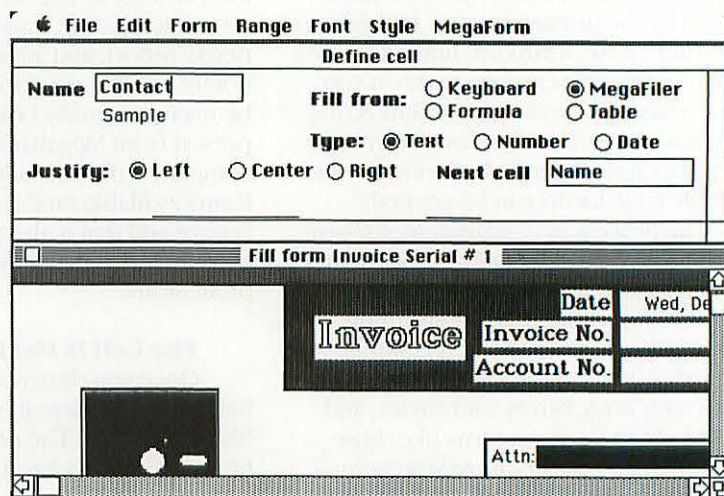
### The Complete Form

Once you define the types of information a form's cells will contain and the information's sources, you're ready to fill out the form. After typing in all the information that must be entered manually, you command *MegaForm* to complete the form's unfilled blanks and then wait while the program calculates formulas, analyzes



Qty	Item No.	Description	Cost	Total
24	101	Large sized door handles	50	1200
12	102	Small sized door handles	30	360
6	103	Window locks (pair)	75	450
11	105	Window alarm	75	825
2	106	All purpose alarm with light	112	224
18	107	Alarm installation kit	12	216
12	108	Door security window	75	900
Total				4,175.00
Tax				250.50
Shipping				41.75
Amount Due				\$4,467.25

**Figure 1**  
MegaForm comes with several predesigned forms, including a sample invoice. The invoice was printed on the Imagewriter.



**Figure 2**  
The Define Cell window permits you to set up cells to calculate or include information obtained from formulas, tables, MegaFiler database files, or the keyboard.



tables, and searches for information buried in database files. You can review the completed form and save it on disk or print it. You can discard your first effort by completing the same form with different information. Once completed forms are saved on disk, they are preserved as an audit trail and cannot be changed or edited, although you can review and print them. However, you can still edit or redesign the master form on which completed copies are based.

All forms must have at least one cell that is filled manually. You might think that this dooms you to completing one form after another yourself, but don't worry. You can set up forms that use one manually filled cell to trigger the completion of one or more forms. In this way you can have *MegaForm* complete dozens of forms in a billing session without looking at more than the first form.

## The Form in Performance

*MegaForm's* performance has some highs and lows that you should consider before you purchase the program. Depending on a form's size and complexity, I would probably find daily use of *MegaForm* awkward or painstakingly slow. I found that filling out or printing large or complex forms, such as *MegaForm's* expense report form (see Figure 3), slowed the program down to the point that it may not be worth using.

Because of the Mac's screen size, you can see only part of large forms as you fill them out. I felt I was developing tunnel vision because information I wanted to view was often out of sight. Scrolling with the scroll bar arrows is slow, and while you can use the scroll boxes, they are imprecise.

Another problem the program has with long or complex forms becomes apparent when you enter information. After I

### WEEKLY EXPENSE REPORT (REFER TO INSTRUCTIONS ON REVERSE)

No. 1001

EMPLOYEE NAME (PRINT) John Smith		BACKGND 123	EXT. 4567	M/S 12	LOC 34	DIV Mac	DEPT Travel	WEEKENDING Fri, Dec 21, 1984		
MAIL CHECK TO - STREET 34 Copper Lane, Cupertino Ca 95031		CITY & STATE		ZIP CODE		HOLD FOR PICK-UP				
PURPOSE OF TRIP Check out MegaForm										
T R A V E L	DAY AND DATE		SAT 12/15	SUN 12/16	MON 12/17	TUE 12/18	WED 12/19	THUR 12/20	FRI 12/21	TOTALS
	CITIES OR TOWNS VISITED		TO San Diego	San Diego	Los Angeles	Cupertino				
	Mileage - 1.00 per mile		24	0	0	23				
	Auto Rental		56	56	56	56				
	Tolls & Parking		0	5	0	10				
	Air Fare (Company chgd)		121	0	0	125				
	Air Fare (Bus Fare 2400 for 12/15/84)		2	0	0	10				
	Taxi Lim. (incl. tip)		10	0	0	10				
	Lodging Hotel, Motel		58	58	87	0				
	Personal Meal - Breakfast		6	5	7	6				
	Personal Meal - Lunch		6	8	8	7				
	Personal Meal - Dinner		20	10	15	0				
	SUB-TOTAL		303	140	190	229				
	Telephone		1	7	12	3				
	Business Meals		40	0	20	80				
Entertainment		10	30	0	19					
Other Expense		2	3	0	0					
TOTALS		356	180	223	322					
B U S I N E S S T R A N S P O R T A T I O N S	DATE	PLACE	PERSONS ENTERTAINED		BUSINESS PURPOSE		TYPE OF EXPENSE		AMOUNT	
	12/15	Mr. A's	Paul & Paul - Pres. and EXV Pres.		Dinner with Megahaus		DM		40	

Figure 3

The expense report form looks impressive when printed on the Apple LaserWriter. This form is a complex one that takes a long time to design and print.

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typed a figure in an expense report cell and pressed Enter, a delay as long as 2 seconds occurred before the cursor reappeared in the next cell. The cursor also seems to move between cells with an irritatingly slow bounce. The cursor moves nearly instantaneously between cells on short forms, however. Surprisingly, it doesn't take any longer to calculate and complete long forms than it does to do short, less complex forms.

Automatically filling out forms with information extracted from a *MegaFiler* database also takes a long time. I timed how long it took *MegaForm* to complete 30 forms with data from *MegaFiler*. The program had to complete 18 fields for each form while gathering information from two database files. *MegaForm* filled out the 30 forms in an unimpressive 7 minutes.

But printing is *MegaForm*'s weak point. When I filled out and printed the same 30 forms on the Imagewriter, it took over 35 minutes. *MegaForm* required 6 minutes to print a single copy of the expense report and 9 minutes to print a two-page facsimile of a Form 1040. For tax accountants interested in using *MegaForm* to process 1040 forms, that's a rate of 7 per hour.

*MegaForm* isn't entirely to blame for slow printing, since the Imagewriter's printing speed is a limiting factor. The LaserWriter was a little faster, taking just over 5 minutes to print the expense report and a little more than 6 minutes to print the tax form. The larger and more ornately patterned the form, the longer the printer takes to print it. When designing a form, take into account not only the form's appearance but printing time as well, and avoid using unnecessary detail and complex patterns. You can also speed up printing with an option that permits you to print the data within a form without printing the form itself.

As with most new programs, I found a few bugs. One bug had a significant effect on *MegaForm*'s performance. While processing 30 forms and automatically printing them one after the other, *MegaForm* encountered an error in the data in a *MegaFiler* file. The incorrect data was to appear in only 1 of the 30 forms. However,

as the printing went on, *MegaForm* was unable to supply data correctly for the rest of the forms, even though no errors existed in the data for those forms.

Other than those low points in *MegaForm*'s performance, I found *MegaForm* easy to learn and was pleased with the results I saw after processing groups of forms. The way *MegaForm* automatically extracts information from a database and completes a form is outstanding. *MegaForm* also has a number of nice features, like its ability to reduce a form's size during printing to produce sharp-looking forms half the size of the original and its ability to print a completed form, the form only, or the data only.

It's possible to use *MegaForm* with one disk drive, but a second disk drive or a hard disk is essential if you want to avoid switching disks frequently.

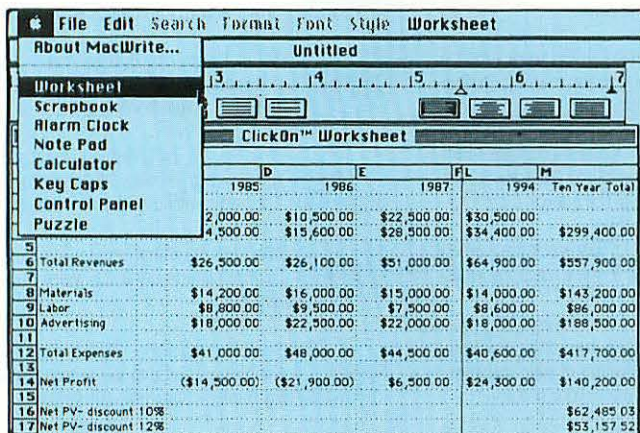
Since much of *MegaForm*'s power comes from working with *MegaFiler* files, I recommend getting a good demonstration of *MegaFiler*'s capabilities before buying the two programs. I noticed certain problems during sorting and searching that raised reservations about *MegaFiler*'s suitability for sophisticated applications. As a work saver, *MegaForm* has great potential for reducing the bother of completing business forms to a simple formality. However, until the program's printing performance is improved, it may be early to buy. □

Bill Grout is the author of *Symphony for Your Business* from Hayden Book Company and *MultiMate Step by Step*, forthcoming from Addison-Wesley.

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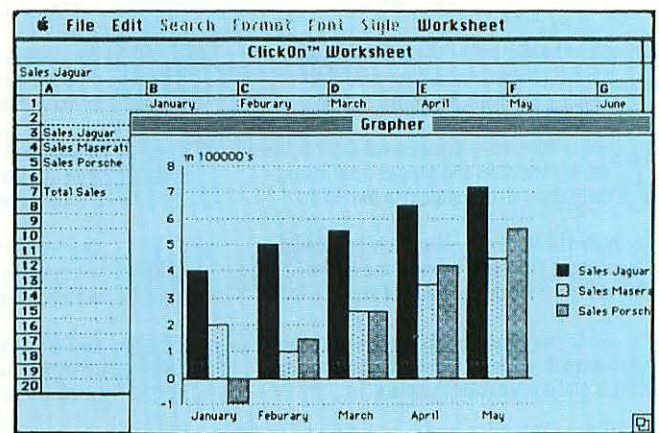


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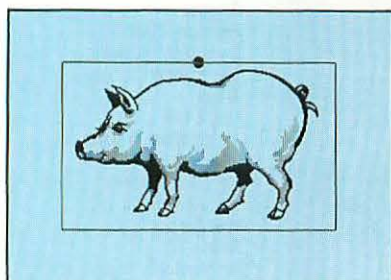
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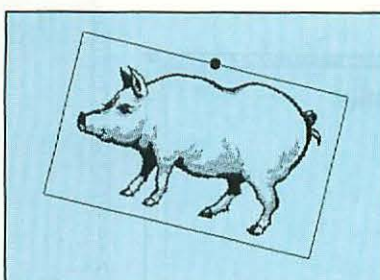
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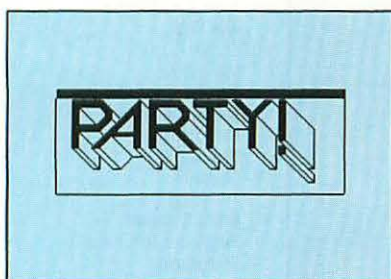
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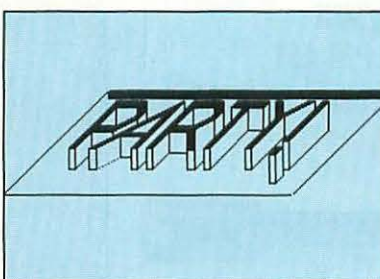
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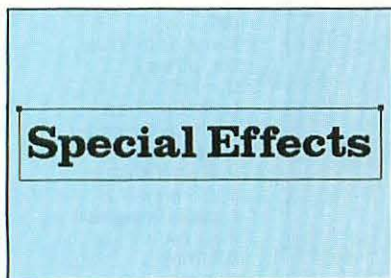
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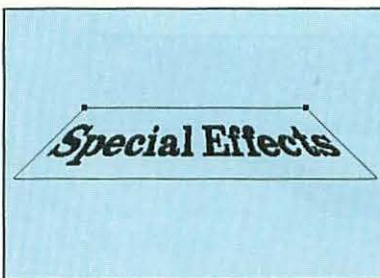
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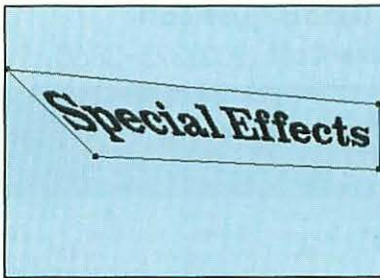


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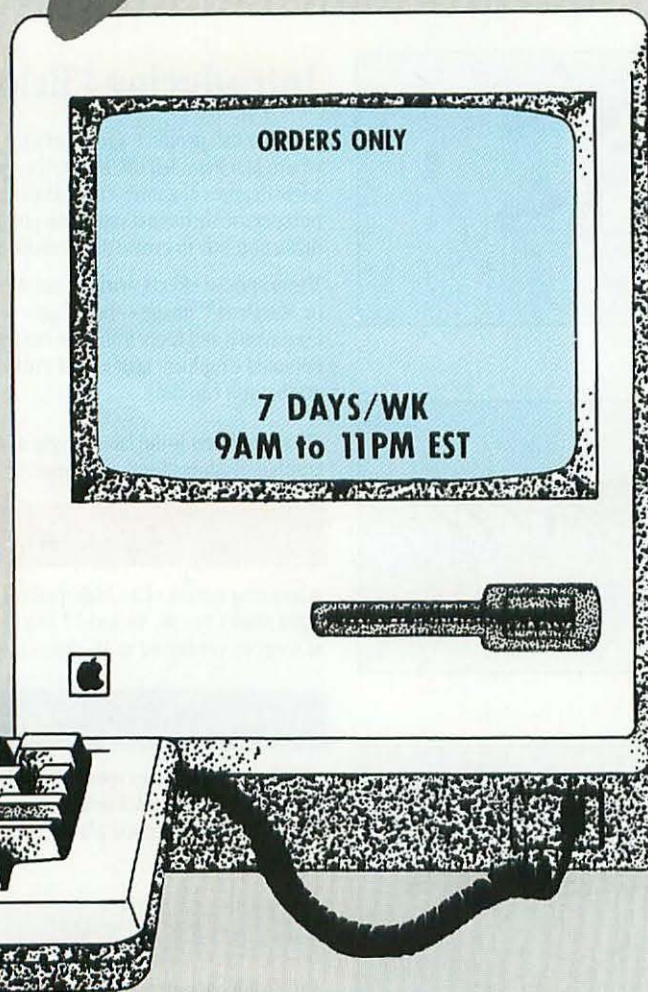
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# Mr. CW in ChipWit Caves

Sharon Zardetto Aker

*Hone your programming and problem-solving skills by taking a ChipWit to lunch*

Have you ever seen a robot on roller skates careening across the Macintosh screen, scarfing down oil cans, floppy disks, slices of pie, and anything else in its path? If you haven't, let me introduce you to a unique educational game from Brainpower called *ChipWits*.

The company describes *ChipWits* as an educational game that teaches problem solving, computer programming, and the basic principles of artificial intelligence. At the center of the game is the ChipWit, a robot that you program to complete a dangerous mission in one of eight "environments" with names like Greedville, Doom Rooms, and Octopus Garden (see Figure 1).

## The Robot and Its Environment

The ChipWit robot has a lot of flexibility: it can turn, move, smell, touch, look, pick up an item, discharge an electrical zap, and even sing. The environments for which you prepare the robot vary in complexity and content. Each environment consists of from 8 to 100 interconnected rooms. Items both helpful, such as disks and oil cans, and harmful, such as the dreaded electrocrabs, are randomly scattered throughout the rooms. Half of your programming

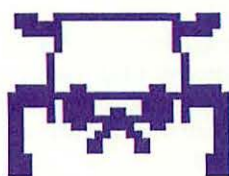
problem is getting the robot to distinguish between the two types of items; the other half is maneuvering the robot through the rooms.

Each of the robot's abilities is limited in some way. It can see only straight ahead and only as far as the first object or wall, touch only the space directly in front of itself, and turn only 45 degrees at a time. The way you combine its abilities makes the robot a success or a failure in any environment. The fun—or frustration—begins when you realize how literally your instructions are interpreted. If you tell the robot to look for a disk, and an oil can is in its line of sight, it doesn't see the oil can—it registers only that it did not see a disk.

In most environments the ChipWit's goal is to pick up as many disks and oil cans as possible, since they are worth points. Of overall concern is the robot's lifetime, measured in cycles. Each instruction you use takes a certain number of cycles and also eats into the robot's fuel supply. You have to balance the cost of an instruction, in both cycles and fuel, against the possible benefits of having the robot perform the instruction.

Once the robot's cycles are exhausted, the game is over. The robot can be refueled, however, by picking up pie and coffee, which probably says something about the quality of the programmers' diet while they developed *ChipWits*. You must also take into account the damage the robot may sustain if your instructions do not have safeguards in them. Not only do you have to avoid dangerous objects such as bombs, bouncers, and electrocrabs, but you also have to prevent the robot from bumping into too many walls.





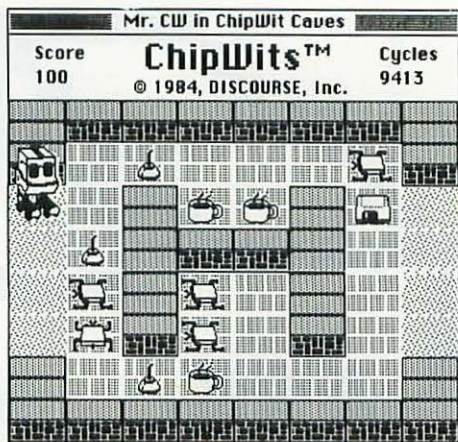
*The ChipWit robot can see, feel, move, and munch, but like all machines it has no mind of its own and can't tell a cup of coffee from a deadly electrocrab. Programming the robot to cope with various environments is the aim of the game from Brainpower.*



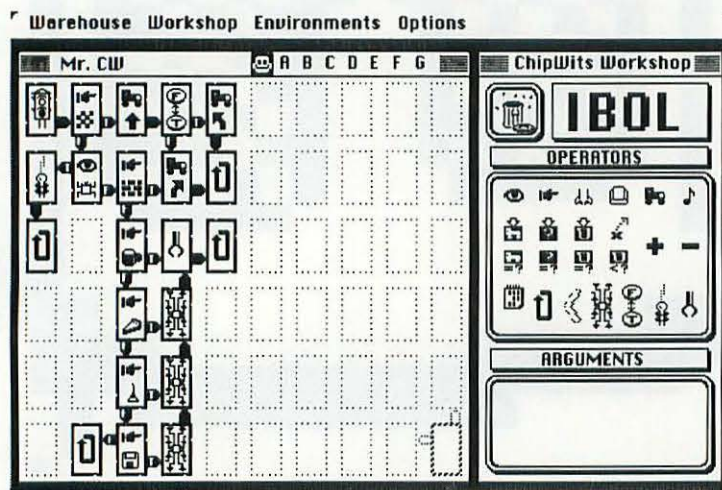


**Figure 1**

You program the ChipWit robot to go on a dangerous mission in one of eight environments with names like *ChipWit Caves*, *Mystery Matrix*, and *Peace Paths*. Each environment, consisting of a series of interconnected rooms, has a distinct mission for the ChipWit to complete.

**Figure 2**

The Workshop is the core of ChipWits. You design the robot's circuits by plugging icons, which represent operators and arguments, into the control panels. The first four panels can be read as: start; feel for the floor; if true, move forward; if false, look out for electrocrabs.



### IBOL Programming

Programming a ChipWit for a mission is unlike writing instructions in traditional programming languages such as BASIC or Pascal. You design the robot's circuits in the ChipWits Workshop, plugging "instruction chips" into the control panels (see Figure 2). *ChipWits* uses its own language, called IBOL for *icon-based operating language*, to represent program instructions on the chips. Each chip contains a single instruction set that usually consists of an operator and an argument. An operator is an action command that tells the robot what to do, such as look, move, or smell. An argument is either an object that the operator acts on, such as an oil can or a coffee cup, or a direction, such as forward or 45 degrees to the left. To design a chip, you simply click the operator and the argument of your choice.

The icons used for the chips are clever and, for the most part, clear. The program's designers went a little icon-crazy in the end, however, and used a measuring cup filled to different levels to represent numbers. Measuring cups may seem like a good concept, but in practice their gradations are difficult to distinguish.

The program flow, which tells the robot what instruction comes next, is controlled by relocatable tabs that point to the next chip in the sequence. Chips that test for a certain situation—Does the robot see the pie? Can it feel the disk?—have two tabs coming out of them, one labeled true and the other false. The direction of the flow depends on the result of the test.

IBOL has advanced programming features that allow you to increase the speed and efficiency of the robot. For example, the language lets you handle three memory stacks at a time. A stack is simply a place to store something you want to remember. The robot has stacks for moves, objects, and numbers.

In addition IBOL lets you direct the program flow from the main panel to a subpanel and back again, as well as loop back to the beginning of the current panel. This feature lets you use a set of instructions, such as a subpanel for a song, in any of your ChipWit designs. You can even control the flow of the program manually by assigning keystrokes to specific tasks. You can save *ChipWits* programs at any stage of development and designate them as appropriate to particular environments (see Figure 3).

### ChipWits in Action

When a robot is ready to begin its mission, it is placed in the first room of the chosen environment. The graphics are superb, with excellent perspective on the room as the robot moves around. Almost every action is visible: a "sight line" extends from the robot's eyes, a feeler emerges to touch the space in front of it, and a mechanical arm emerges from the top of its head to grasp the object that you tell it to pick up. Sound is also used well. Each action has its own sound effect; the electronic munching is noteworthy.

The room where the robot moves takes about two-thirds of the screen. The rest of the screen lets you keep track of your program (see Figure 4). The Status panel provides information about the health of your ChipWit, such as fuel and damage levels and the last key pressed. The Memory panel represents stacks of objects, moves, and numbers that have been stored for the ChipWit to remember under special circumstances.

The instruction chips in your program are shown in a Debug panel, and the chip currently being executed is highlighted. The panel is useful for tracing the execution of your programs. You can choose any of three debug modes: fast, slow, or step-through, which requires a mouse click to take the program from one instruction chip to the next.

### An Educational Tool?

*ChipWits* holds promise as an educational tool, but it falls short as a way to teach programming concepts. Its use of memory stacks is not consistent with meth-



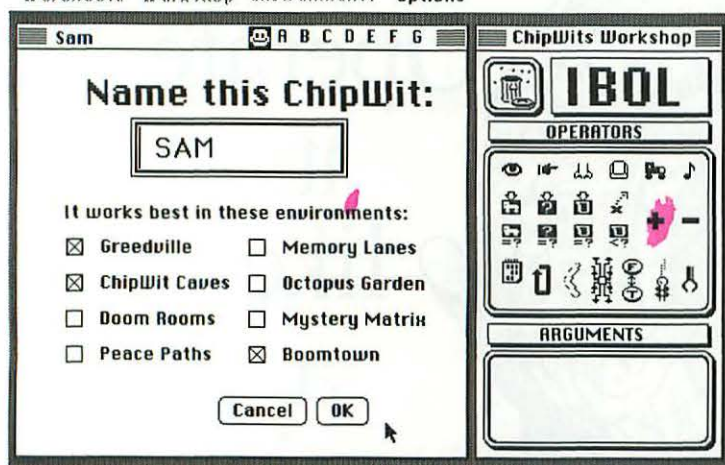


Figure 3

You can save finished robots or ChipWits in progress. You can also link a ChipWit to specific environments. When you select an environment, the names of the robots linked to that environment appear in the Warehouse menu.

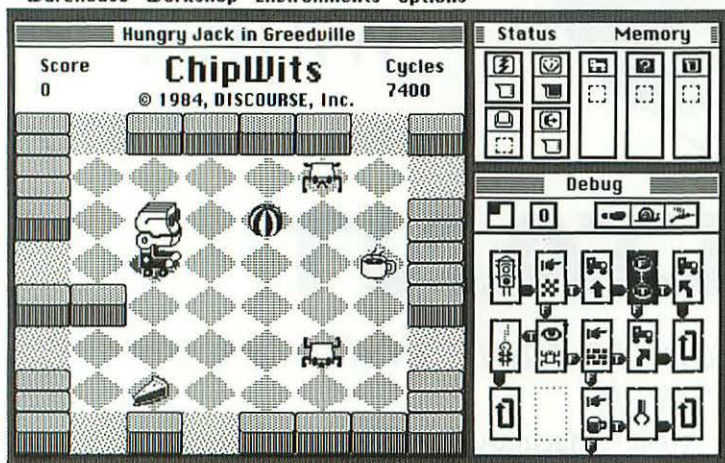


Figure 4

The Status panel has icons that monitor aspects of the ChipWit's health, such as damage sustained, fuel levels, and the robot's distance from an object. The three columns in the Memory panel represent stacks of objects, moves, or numbers. The Debug panel traces the execution of the program.

ods of memory management used in the higher-level languages taught in schools. In addition, IBOL programming branches at almost every step, unlike the more linear algorithms needed in languages like BASIC or Pascal.

IBOL may be more suitable for learning problem-solving techniques in general. The Debug panel, detailing the program flow—in effect, the thought process—might offer a useful approach to such training. However, since you cannot control the environments or goals yourself, *ChipWits'* suitability even in this area is questionable.

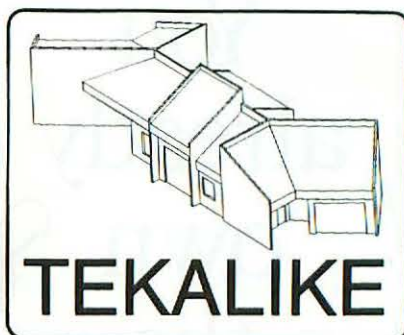
The documentation that accompanies *ChipWits* is a disappointment, with a few factual errors and little useful information. While the game's philosophy may be to learn by doing, no one should have to play a game to figure out how it should be played.

Not too many reviews come with guarantees, but this one guarantees that if you like programming, you'll love *Chip-*

*Wits*. If you're not of the programming persuasion, you may still like *ChipWits*, but be ready to pay a lot of attention to detail and willing to take one small step at a time. And watch out for those electrocrabs. □

■■■■■■■■■■ Sharon Zardetto  
Aker is the author of two forthcoming books: *MacPack* (Ashton-Tate) and *Microsoft BASIC for the Mac: A Beginner's Guide* (Scott, Foresman & Company).

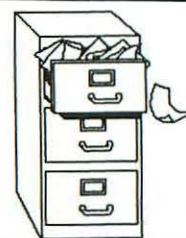
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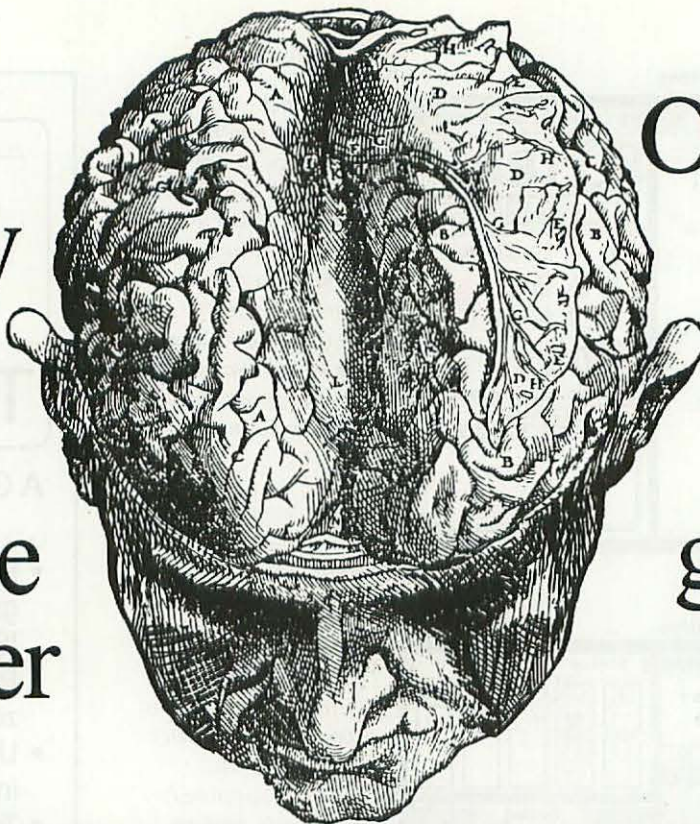
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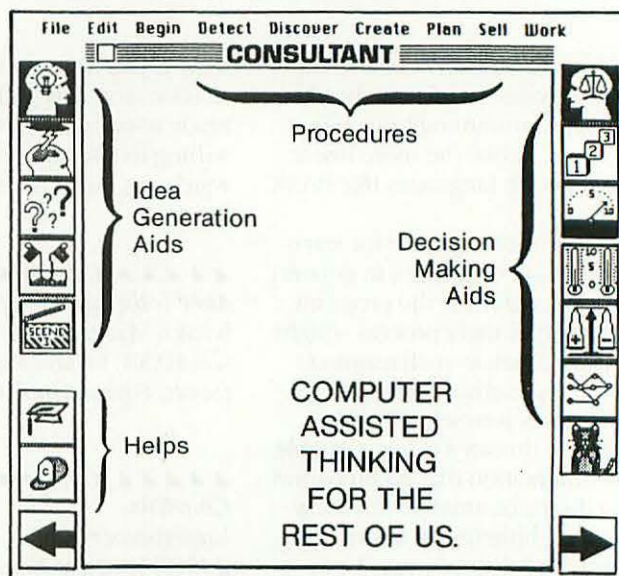
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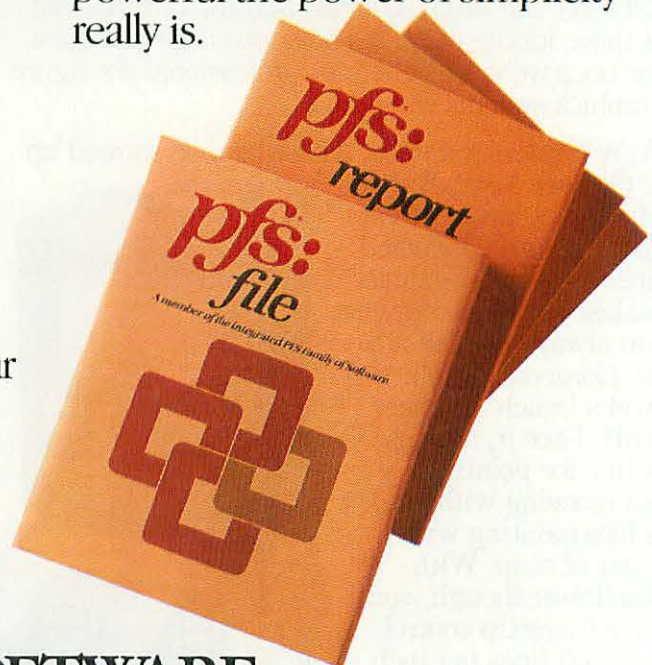
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# Macware News

*The latest developments in Macintosh software, hardware, and accessories*

**Edited by Erfert Nielson**

Macware News announces new Macintosh products. Those listed here are available now or will be available in the near future.

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include Design Checks, Netlist to Gerber format, Netlist to SCICARDS format, and Plotter Drivers. Future packages in the series include *Analog/Digital Simulator* and *Graphics Editor for VLSI Layout*. McCAD requires a 512K Macintosh, and a hard disk is recommended. List price: *Schematic Entry* \$300, *PCB Layout* \$300, Utilities \$100 to \$200 each.

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past the password scheme, files will appear scrambled and indecipherable. List price: \$29.

### Mac Tracks

A program that lets you store frequently used commands, series of commands, or blocks of text and then select them by pressing a key that you assign. *Mac Tracks* records keystrokes and mouse movements and lets you create your own ⌘-key commands. You can store up to 5000 characters on any one key. You install *Mac Tracks* as a desk accessory in the Apple menu. List price: \$29.

⌘ Mighty Mac™ Data File Search Display Special MESSAGE

Events		Directory	Reminders	Notes
Date	Time	Event	Notes	
4/17/85	9:00 AM	Meeting with art director	Discuss photos for mud wrestler interview	
4/17/85	10:30 AM	Staff meeting	Revise author deadlines	
4/17/85	12:30 PM	Lunch with Balso Snell	Remember, Balso doesn't like sushi	
4/17/85	2:00 PM	Meet with copy editors	Discuss use of subjunctive	
4/17/85	3:30 PM	Job interview, Burger King	Don't forget resume	
4/17/85	6:00 PM	Mom's birthday party	Pick up pizza after work	

Jan	Feb	April 1985 ◀ ▶							0	1	A	B	C	D	E
Mar	Apr	S	M	T	W	T	F	S	2	3	F	G	H	I	J
May	Jun		1	2	3	4	5	6	4	5	K	L	M	N	O
Jul	Aug	7	8	9	10	11	12	13	6	7	P	Q	R	S	T
Sep	Oct	14	15	16	17	18	19	20	8	9	U	V	W	X	Y/Z
Nov	Dec	21	22	23	24	25	26	27							
		28	29	30											

It is now: 12:24 PM - Wed, Apr 17

Mighty Mac, Advanced Logic Systems



## Backup and Utility Software

<b>Assimilation Process</b>	
Lock It	20.00
Mac Memory Disk	20.00
Mac Mouse Tracks	20.00
<b>Bay Systems Software</b>	
MacCrackPak II	59.00
<b>Central Point Software</b>	
Copy II Mac	22.00
<b>Hippopotamus Software</b>	
Hippo-Lock	85.00
<b>Ideaform</b>	
Mac Labeler	38.00
<b>MicroAnalyst</b>	
MacZap	39.00
<b>Mainstay</b>	
MacBooster	60.00
<b>Nevins Microsystems</b>	
TurboCharger	69.00
<b>Protek-It Software</b>	
ProCopy	32.00
<b>PCA Software</b>	
MacBackup	45.00
<b>SoftStyle</b>	
Epstart	24.00
Jetstart	32.00
Laserstart	68.00
<b>Southeastern Software</b>	
Mac Transfer	32.00
<b>Tardis Software</b>	
Fast Finder	65.00
<b>Tesseract Software</b>	
MacCopy	54.00

## Desk Accessory Programs

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QuickSet	69.00
<b>Haba Systems</b>	
Haba Window Dialer	34.00
<b>Intermatrix</b>	
MacDesk	69.00
<b>Harvard Associates</b>	
Desk Toppers	34.00
<b>Macadam Publishing</b>	
WindoWare Calendar	35.00
WindoWare Phone Book	35.00
Phone Book & Calendar	56.00
<b>MegaHaus</b>	
MegaDesk	75.00
<b>T/Maker</b>	
ClickOn Worksheet	49.00
<b>Videx</b>	
MacCalendar	52.00

## Languages

<b>Apple Computer</b>	
MacPascal	99.00
<b>Consulair</b>	
Mac C/Mac C Toolkit	249.00
<b>Creative Solutions</b>	
MacForth Level I—Explorer's System	89.00
MacForth Level II—Professional System	139.00
MacForth Level III—Developer's Kit	Call
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ExperLogo	81.00
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<b>Hippopotamus Software</b>	
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<b>I.Q. Software</b>	
CP/M For The Macintosh	295.00
<b>Mainstay</b>	
MacASM	75.00
<b>Manx</b>	
Aztec C68K-C	369.00
<b>Megamax, Inc.</b>	
Megamax C Compiler	199.00
<b>Microsoft</b>	
Microsoft Basic	89.00

## SofTech Microsystems

Mac Advantage: UCSD Pascal	199.00
UCSD Pascal Development System	135.00
UCSD Pascal Language Compiler	105.00
Fortran 77 Development System	205.00
Fortran 77 Language Compiler	169.00
Advanced Development Tool Kit	109.00
<b>Softworks Limited</b>	
Softworks C Compiler	259.00

## Communications Software

<b>Apple Computer</b>	
MacTerminal	85.00
<b>Haba Systems</b>	
HabaCom	48.00
<b>Hayes Microcomputer</b>	
Smartcom II	92.00
<b>Compuserve</b>	
Compuserve Starter Kit	23.00
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Mite	105.00
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In Touch	99.00
<b>Source Telecomputing</b>	
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<b>Southeastern Software</b>	
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## Business Software

<b>Advanced Logic Systems</b>	
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MacProject	99.00
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Financial Planning	65.00
Investment Planning	65.00
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SoftForms	25.00
<b>Assimilation Process</b>	
Mac Spell Right	64.00
The Right Word	64.00
<b>Boston Software Publishers</b>	
The MacPublisher	75.00
<b>Brock Software</b>	
Keystroke Database	275.00
<b>Computer Software Design</b>	
MacLion	224.00
<b>Creighton Development</b>	
MacHome	32.00
MacOffice	32.00
MacSpell+	61.00
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Habadex	65.00
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Ensemble	175.00
Hayden: Speller	47.00
I Know It's Here Somewhere	37.00
<b>Hayes Microcomputer</b>	
Please	Call
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The Management Edge	129.00
The Mind Prober	29.00
The Negotiation Edge	149.00
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MegaDesk	75.00
MegaFiler	112.00
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Helix	249.00
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Softmaker II (128K)	89.00
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Stock Portfolio System	119.00
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DB Master Mac	109.00
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Macaccountant	134.00
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Chequebook	32.00
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General Ledger	Call
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<b>Peachtree</b>	
Back To Basics—Mac	199.00
General Ledger	89.00
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Personal Accountant	55.00
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General Ledger	Call
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<b>Arbor Softworks</b>	
Animation Tool Kit I	35.00
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<b>Diversions, Inc.</b>	
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DaVinci: Building Blocks	47.00
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McPic! Volume 2	30.00
The Slide Show Magician	36.00
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Images	28.00
<b>Miles Computing</b>	
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MacCoach	45.00
<b>Axlon</b>	
Typing Avalanche	37.00
<b>BrainWorks</b>	
Chipwits	31.00
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Thinkfast	25.00
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Smooth Talker	89.00
<b>Forethought</b>	
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Pyramid Of Peril	35.00
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Hearts	19.00
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<b>Blue Chip Software</b>	
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<b>Telarium</b>	
Amazon	24.00
Dragon World	24.00
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<b>Apple</b>	
Macintosh External Drive	399.00
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5.5 MB Mac OmniDrive	1319.00
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MacBottom Hard Disk	Call
<b>Remington</b>	
Mac External Drive (Shugart)	269.00
<b>lomega</b>	
The Bernoulli Box	1349.00
<b>Quark</b>	
QC10 Meg Hard Disk	1425.00
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<b>Hayes Microcomputing</b>	
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Smartmodem 300	135.00
<b>Kensington</b>	
Portable Modem (300 Baud)	95.00
<b>Microcom</b>	
Mac Modem 1200 w/Software	399.00
Mac Modem 2400 w/Software	629.00
<b>Prentice</b>	
Popcom X-100 Modem (Mac)	279.00
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<b>Toshiba</b>	
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<b>A.M. Products</b>	
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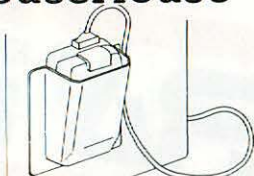
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- Two piece protective hard-shell cover set.
- Protects Macintosh when not in use or while in transit (also fits over Mac in tote bags).
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- Underside of screen cover stores up to six diskettes.
- Color of the Macintosh.
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Circle 178 on reader service card

## ■ Brainpower

24009 Ventura Blvd. #250  
Calabasas, CA 91302  
818/884-6911

## TeleChess

An animated chess game that enables you to send moves to another player by modem. *TeleChess* integrates chess graphics with communications software. Moves appear simultaneously on both computer screens, and a "chat" mode lets players talk to each other on screen during the game. The package includes two program disks and an installation program for customizing each player's modem. List price: \$69.95.

## ■ Diehl Graphsoft

3246-K Normandy  
Woods Dr.  
Ellicott City, MD 21043  
301/461-9488

## Minicad 3D-Designer

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objects or parts of objects. You can transfer *Minicad* files to *MacPaint* to enhance the drawings. List price: \$295.

## ■ Digital Technology International

500 West 1200 South  
Orem, UT 84058  
801/226-2984

## Display Ad Make-Up System

A display ad makeup system that sends output to either a laser printer or a digitized phototypesetter. *Display Ad Make-Up* lets you combine text and graphics on the screen to lay out an ad. The program provides the codes required to drive a typesetter; you need not enter any typesetting codes. You can select various typefaces and sizes in points or picas; move blocks of type on the screen; cut and paste elements; create boxes, rules, and borders; and edit text on the screen. List price: \$2995.

## ■ Hayden Software

600 Suffolk St.  
Lowell, MA 01854  
800/343-1218

## VideoWorks

A program that lets you create animation on the Macintosh screen. You can draw your own images using the program's graphics application or use the program's Art Grabber tool to move *MacPaint* pictures (including original drawings, digitized images, or clip art) into *VideoWorks*. You animate images frame by frame or in real time by moving the mouse. *VideoWorks* includes the following features: the ability to have 24 independent activities occurring on the screen at once; an editor with cut, copy, paste, and clear functions; full matting capability for separation of figure and background; an incremental motion generator; speed adjustment; and sound effects. The program



also includes a disk containing a library of artwork and a demonstration disk with examples of the kinds of movies you can create. List price: \$99.95.

### ■ Infocom

**55 Wheeler St.  
Cambridge, MA 02138  
617/492-1031**

### Wishbringer

An interactive fiction game in which you are a mail clerk in a seaside town that has come under a spell cast by the mysterious Evil One. As you seek to solve the mystery, you must avoid being jailed by her henchmen, the Boot Patrol. *Wishbringer* comes with several elements necessary to the solution of the story, including a sealed special-delivery letter, a map of the town, and a glow-in-the-dark stone. The game can be played on two difficulty levels: novices can use *Magick*, a set of seven wishes, each of which can be used only once; aficionados can increase the challenge of the game by refraining from magic, since all the puzzles can be solved by logical means. List price: \$39.95.

### ■ Infosphere

**4730 S.W. Macadam Ave.  
Portland, OR 97201  
503/226-3515**

### XL/Serve

A program that permits Macintoshes connected by Apple's AppleTalk Personal Network to share a hard disk and an Imagewriter printer that are connected to a Macintosh. *XL/Serve* provides disk and printer server software that runs on a host Macintosh XL under *MacWorks*, driver software for user Macintoshes, and a backup and restore utility for archiving server volumes. The server allows partitioning of the host disk into a number of volumes, which can be designated read-only or read/write. List price: \$195.

### ■ Mainstay

**28611B Canwood St.  
Agoura Hills, CA 91301  
818/991-6540**

### Telescope

A communications program that enables you to transmit graphics as well as text. *Tele-*

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- You can print labels or formatted reports, "copy" and "paste" any records or sets of records from DATAFAST files into your MacWrite documents (letters, memos, articles), you can also generate "text files" to be accessed by other programs
- You can use predefined formats of records (included) or define your own formats
- DATAFAST is very fast even when your data files are large. It can handle even the most demanding professional applications
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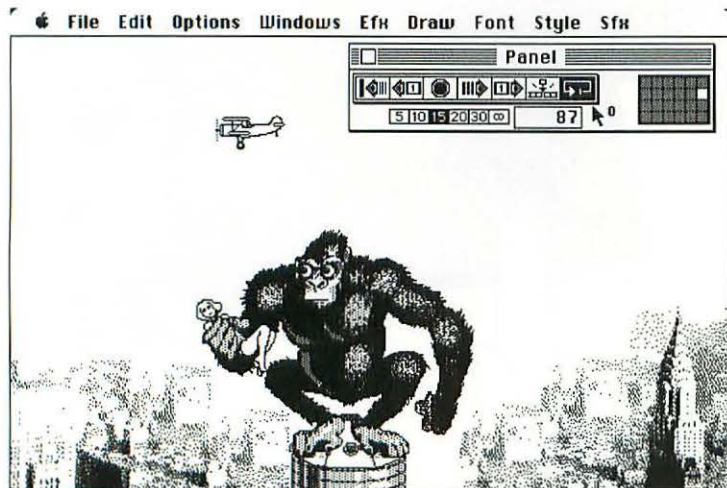
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### STATSOFT

(the developers of STATFAST)  
2831 East 10th Street, Suite 3, Tulsa, OK 74104. (918) 583-4149

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Circle 302 on reader service card



VideoWorks, Hayden Software



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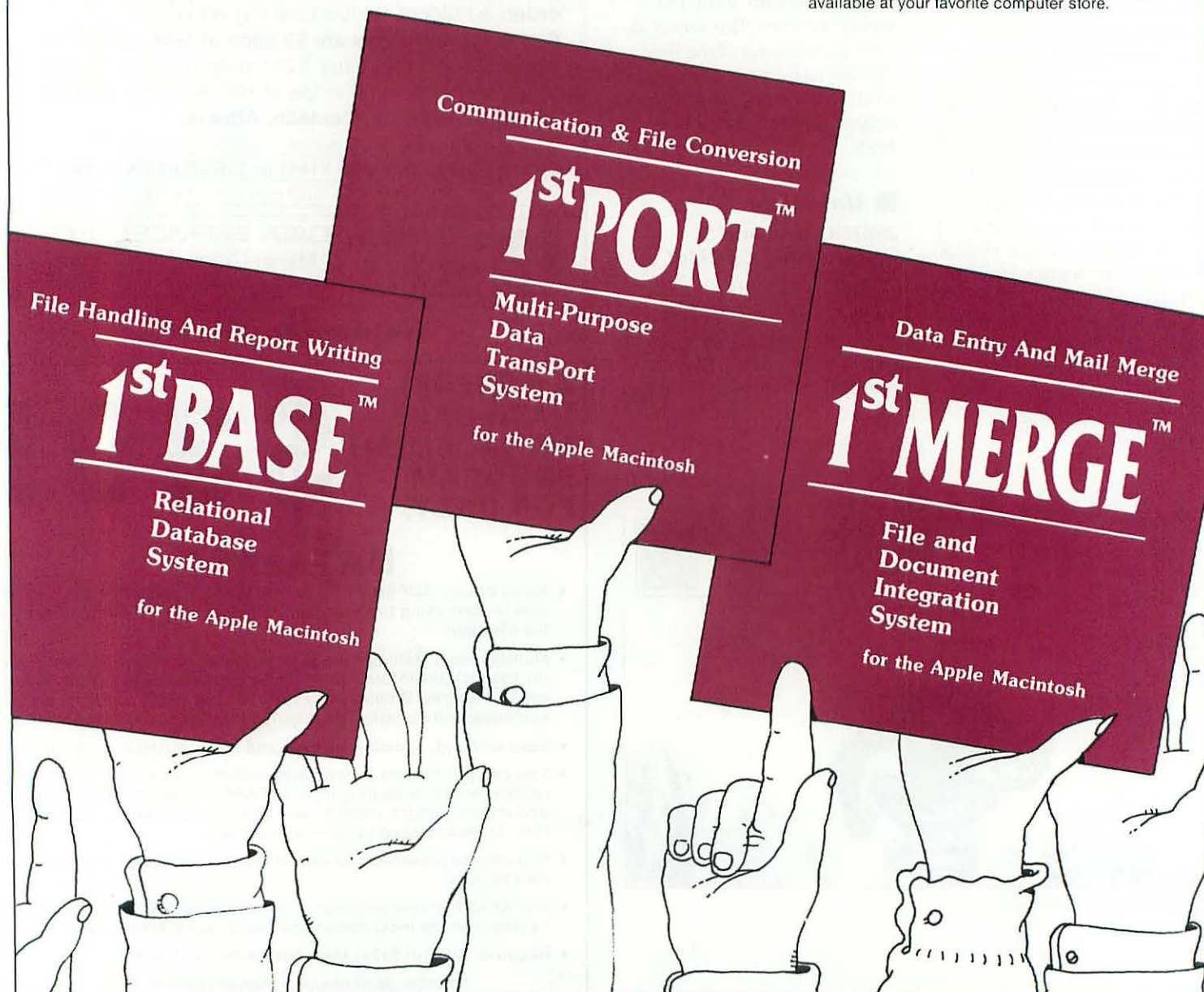
1stPORT™ is a communication and data conversion package that allows your Macintosh to function as a terminal for communicating with

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with your own data. All of MacWrite's special type fonts and sizes are available. In addition, graphics including graphs and MacPaint® pictures may be pasted into MacWrite documents and merged. Other features include creating up to five across labels and printing directly onto envelopes.

1stPORT, 1stMERGE and 1stBASE all run on both the 128k and 512k Macintosh and are available at your favorite computer store.

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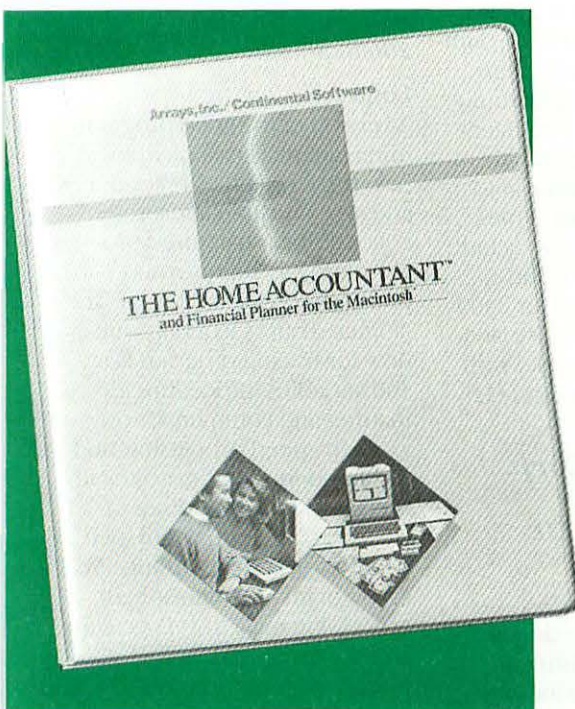
Circle 81 on reader service card



# The Home Accountant and the Macintosh.

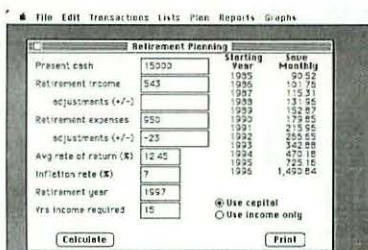
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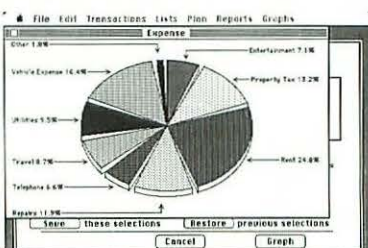
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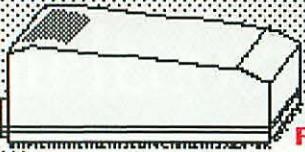
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*scape* uses character-coded messages to produce various text sizes, fonts, and graphics shapes. You can also create simple animation. The program features an integrated communications directory, intelligent macros, universal terminal emulation, error-checking, auto-dial, and an unattended message service. Protocols include ASCII, ASCII prompt, and Xmodem at 300, 1200, or 2400 bps. A BINHEX utility is also included. *Telescope* works with most modems. List price: \$125.

### ■ Megabaus Corp.

5703 Oberlin Dr.  
San Diego, CA 92121  
619/450-1230

#### MegaDesk

A collection of three desk accessories—an appointment book, a transfer routine, and a card file—that can be moved to any Macintosh application that supports desk accessories. The appointment book lets you display a week or a day at a glance, write notes for every hour of the day, and print out appointment summaries. The transfer routine lets you jump from one application to another in less than a fifth of the usual time. The transfer routine leaves the Clipboard intact. The card file works like the Macintosh Scrapbook but also lets you store and retrieve information, including text and pictures, using names sorted in alphabetical order. You can use the card file as a phone directory, a task file, a scrapbook, or a simple database. List price: \$125.

### ■ Microsoft Corp.

10700 Northup Way  
Bellevue, WA 98009  
206/828-8080

#### Logo

A version of the Logo programming language that includes new turtle graphics procedures and an extensible interpreter. Logo teaches structured programming techniques and problem-solving strategies. The language offers a debug window for tracing program flow and variables, procedure formatting and comments, arrays for high-speed processing, and disk/modem random access filing. QuickDraw graphics include variable pen width, pen patterns, and shape filling. Precision math and high-speed processing make this Logo suitable for novices as well as experienced programmers. List price: \$124.95.

### ■ Nevins

#### Microsystems

210 Fifth Ave.  
New York, NY 10010  
212/563-1910

#### TurboCharger

A program that increases disk access speed on a 512K Macintosh. Tasks such as loading a program and searching a file are 300 to 1000 percent faster with *TurboCharger*. Once installed on a Macintosh startup disk, *TurboCharger* works automatically, buffering critical areas of disk in RAM to increase performance. *TurboCharger* is a disk-memory cache system; unlike a RAM disk, *TurboCharger* uses a small amount of memory (as little as 32K can be used for buffering), works with copy-protected software, and can be used with large programs. *TurboCharger* can be used with most Macintosh software. List price: \$95.



## ■ New Canaan MicroCode

136 Beech Rd.  
New Canaan, CT 06840  
203/966-8588

## Mac Disk Catalog

A program that reads floppy or hard disk directories and builds a database. *Mac Disk Catalog* sorts seven ways: by file name, volume name, creation date, modification date, creator, file type, and category code. The program has a built-in list of common program categories. *Mac Disk Catalog* prints a report of files and volumes and also prints disk labels and 3- by 5-inch index cards. *Mac Disk Catalog* saves information as text with embedded tabs, so it can be transferred to other applications such as *Microsoft File*. List price: \$39.95.

## ■ Priority Software

635 S. Sanborn Rd. #22  
Salinas, CA 93901  
408/757-0125

## Gateway

An interactive text adventure that includes a set of color prints containing clues. You

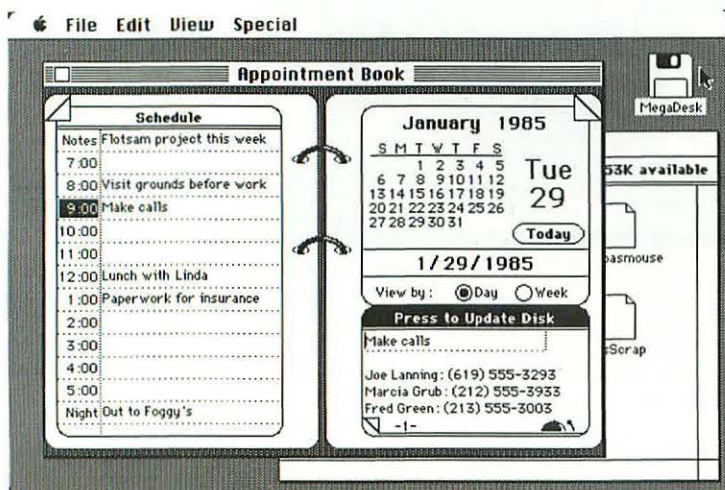
search a decrepit building to solve the mystery of a gateway to another world. Once through the gateway, you find yourself in a parallel universe, where you try to track down and destroy an evil force that is threatening the world. The game includes on-screen graphics and the ability to save multiple games. List price: \$49.95.

## ■ Rune Software

80 Eureka Square #214  
Pacifica, CA 94044  
415/355-4851

## Talkshow

A program that lets you integrate graphics and speech. You can transfer *MacPaint* graphics from the Clipboard to *Talkshow*, create animated sequences, and add speech with the program's speech synthesizer. Portions of a *Talkshow* production can be hidden behind objects within a drawing frame; clicking the mouse calls the hidden frames, which can in turn contain hidden frames.



MegaDesk, Megabaus

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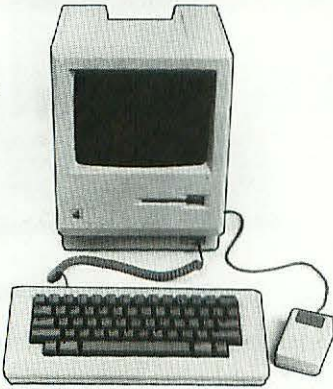
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The length of a *Talkshow* presentation is limited only by available disk space. *Talkshow* frames can be displayed at pre-set intervals or activated by clicking the mouse button. Applications include animated slide shows for business presentations, educational slide shows, and entertainment. List price: \$149.

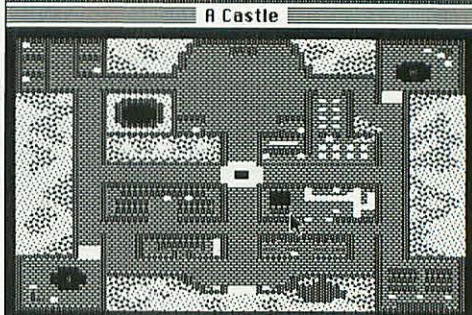
■ **Sierra On-Line**  
**P.O. Box 485**  
**Coarsegold, CA 93614**  
**209/683-6858**

**Ultima II**  
A fantasy role-playing game in which you create your own characters, setting attributes such as strength, agility, stamina, charisma, wisdom, and intelligence. You travel back in time to attempt to defeat Minax, enchantress of evil. You battle monsters, wizards, and humanoids as you travel through villages, dungeons, and eventually outer space. The game's graphics depict nine planets

over eight time periods. You can save games periodically and resurrect characters who are killed, rather than start over. List price: \$59.95.

■ **Silicon Beach Software**  
**P.O. Box 261430**  
**San Diego, CA 92126**  
**619/695-6956**

**Accessory Pak #1**  
A disk containing several desk accessories and programs. The Paint Cutter program allows you to select and copy any portion, up to a full page, of a *MacPaint* document to the Clipboard or directly to the Scrapbook. Screen Saver turns off the screen display after a period of inactivity; a small image bounces around on the screen to let you know the Mac is still on. Rulers for MacPaint provides rulers in inches, centimeters, and pixels; you can place the rulers next to the

Game	Commands	Intent	Armour	Weapons	Spells
A Castle					
					
Worldly Possessions					
4-Keys 78-Torches 77-Tools 21-Wands 15-Staffs 14-Boots 10-Cloaks 52-Helms 7-Gems 17-Rings 8-RedGems 13-SkullKeys 7-GreenGems 14-Buttons 19-Tassels 1-Coin 19-Idols 14-TriLithiums					
otto					
Male Elven Thief Str=30 Agl=50 Sta=5 Chr=20 Wis=1 Int=4					
Hitpoints ----- 8963					
Provisions ----- 9961					
Experience ----- 3412					
Gold Pieces ----- 197					
Command Journal					
CMD-North CMD-Pass CMD-South CMD-South CMD-View with magical helm...					

Ultima II, Sierra On-Line



*MacPaint* window or paste them into a document. The QuickEject desk accessory immediately ejects all disks and resets the system. The Coordinates desk accessory indicates the screen coordinates of the pointer as you move it. List price: \$39.95.

### ■ **SMB Development Associates**

P.O. Box 3082  
Chatsworth, CA 91311  
818/341-2523

### ■ **Macmate!**

A RAM disk for the 512K Macintosh. *Macmate!* speeds up disk access by emulating a random access disk drive in memory. *Macmate!* features include auto-load, auto-drive default, and user-selectable RAM disk size (the program always leaves at least a 128K system). A print spooler function enables you to print documents while running applications on the Mac. List price: \$49.95.

### ■ **SoftTech Microsystems**

16875 W. Bernardo Dr.  
San Diego, CA 92127  
619/451-1230

### ■ **MailManager**

A list, label, and form-letter generator. *MailManager* maintains name and address information, which is used to generate phone and address lists and mailing labels. The information can be merged with *MacWrite* or *Microsoft Word* files to generate documents such as personalized form letters. Those files can contain graphics created with *MacPaint* or other graphics programs. Within each record, you can define up to 72 identifying characteristics in addition to the basic address fields. Those characteristics can be assigned to individual addresses and used as selection criteria when determining

which subgroup qualifies for a particular mailing. *MailManager* prints merged information with no pause between records. List price: \$119.

### ■ **Tardis Software**

2817 Sloat Rd.  
Pebble Beach, CA 93953  
408/372-1722

### ■ **FastFinder**

An alternative desktop for the Macintosh. *FastFinder* is text-oriented instead of icon-oriented and provides features not found in the standard Macintosh Finder. *FastFinder* lets you store command sequences in script files; add your own commands to the program's Quickies menu; display directory and disk information in a variety of ways, including selective displays using wild cards; show the contents of files without leaving the Finder; and eject disks immediately. *FastFinder* runs up to five times faster than Apple's Finder and speeds up command selection by providing keystroke equivalents for menu selections. The number of files is limited only by disk space, and the program can handle up to 12 hard-disk volumes at once. List price: \$100.

## Hardware

### ■ **AST Research**

2121 Alton Ave.  
Irvine, CA 92714  
714/863-1333

### ■ **RamStak**

A memory expansion board for the Macintosh XL. Two models of the board are available: one model provides 512K of memory using 64K DRAM chips; the

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**TPS**  
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# Tailor Made

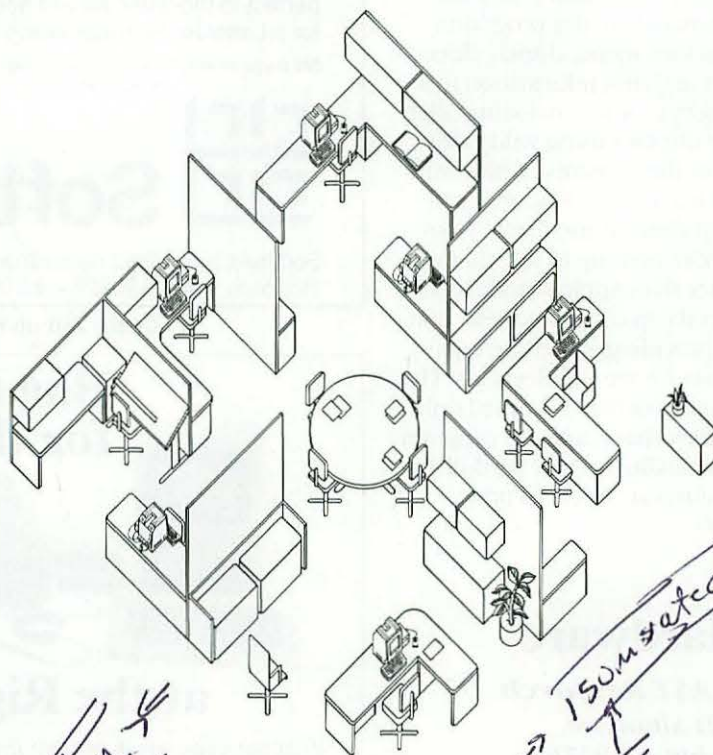
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Odesta Helix takes a new approach. It provides a data-based "pool" into which you may put all kinds of information ---text, numbers, or pictures--- without having to know a programming language or battle with command codes, modes, or imposed structure.

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second model, which uses 256K DRAM chips, is available in configurations providing 512K, 1 megabyte (MB), 1.5MB, and 2MB. Boards with less than the full 2MB have empty sockets, allowing additional 256K DRAM chips to be added. Included with the RamStak boards that use 256K chips are utilities that allow *MacWorks* and the *Lisa Pascal Workshop* to use 2MB of memory, since without modification, these operating systems cannot use more than 1MB. List price: 512K model \$895, 1MB model \$1495, 1.5MB model \$2095, 2MB model \$2695; upgrade kit for adding 512K to the RamStak board \$500.

## ■ Kensington

### *Microware*

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### **Macaccessories A-B Box**

A device that lets you connect two peripherals to one of the Macintosh's serial ports or share one peripheral between two computers. For example,



Macaccessories A-B Box, Kensington Microware

both the Imagewriter printer and a modem can be connected to the A-B Box; you switch between the two simply by pressing a button. Or if two Macintoshes share a LaserWriter printer, you can plug both computers into the A-B Box. When you press A, one Mac takes control of the printer; when you press B, the other takes control. The A-B Box fits under the Macintosh external disk drive. List price: \$99.95.

## Accessories

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### **ColorPens**

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### ■ N² Products

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### **Mac Cables**

A cable that connects the Macintosh to a Hayes or Hayes-compatible modem and a cable that connects the Mac to a variety of printers, including the Imagewriter. List price: each cable \$29.95



## ■ NEC Information Systems

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### Spinwriter Accessory Kit

A kit that allows you to use the NEC Spinwriter printer with the Macintosh. The kit, which includes master and backup disks, a manual, and an interface cable, supports the 2010, 3510, 8810, and e.l.f. 360 model Spinwriters. List price: \$99.

tact Mesa Graphics, P.O. Box 506, Los Alamos, NM 87544, 505/672-1998. Tan Technologies *Mac-n-Pack* runs with the Hewlett-Packard 7475A color plotter. List price: \$149 (requires Microsoft BASIC 2.0). For more information, contact Tan Technologies, P.O. Box 445, Utica, MI 48087, 313/247-0470. Other plotter programs include *MacPlots II*, from The Computer Shoppe, 615 Guilford-Jamestown Rd., Greensboro, NC 27409, \$195; and *MacPlot* from MicroSpot, 9 High St., Lenham, Maidstone, Kent ME17 2QD, England, 0622-858753, \$140.

*This is the last time Macware News will appear. Beginning next month this department will be replaced by a section that will feature several short reviews each month. In order to have your software or hardware product considered for review, send a product description and the product when available to Product Review Editor, Macworld, 555 De Haro St., San Francisco, CA 94107. To run a continual listing advertising your product or service, refer to the Macworld Directory. For further information about the Directory, contact the ad sales department at 415/861-3861. □*

## Notes

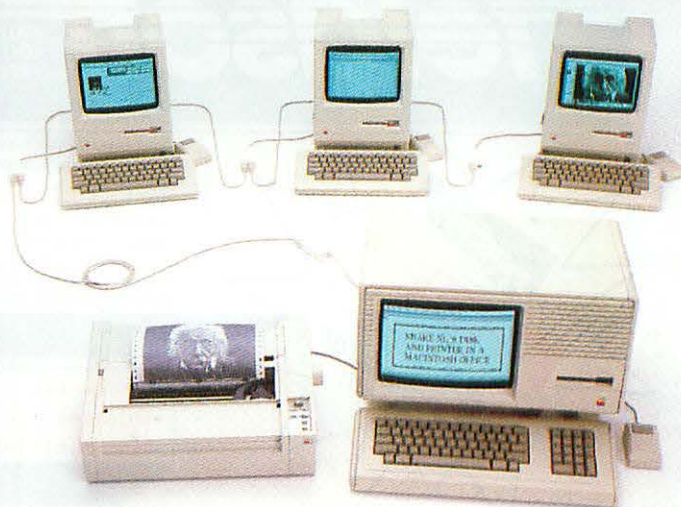
### Another Laser Printer

You can now use Hewlett-Packard's LaserJet printer with the Macintosh. SoftStyle's *Laserstart* printer driver enables you to print graphics or a variety of fonts including Courier, Times Roman, International, Prestige Elite, and Letter Gothic on the LaserJet. List price: \$95, not including font cartridges; LaserJet printer \$3495. For further information, contact your local Hewlett-Packard dealer or sales office.

### Plotters

A number of companies have introduced software that lets you use a variety of plotters with the Macintosh. Mesa Graphics' *Plot-It* allows you to print *MacPaint* documents on the Apple Color Plotter, the Hewlett-Packard 7475A, and the Houston Instrument DMP-29 and PC-695. List price: \$95. For more information, con-

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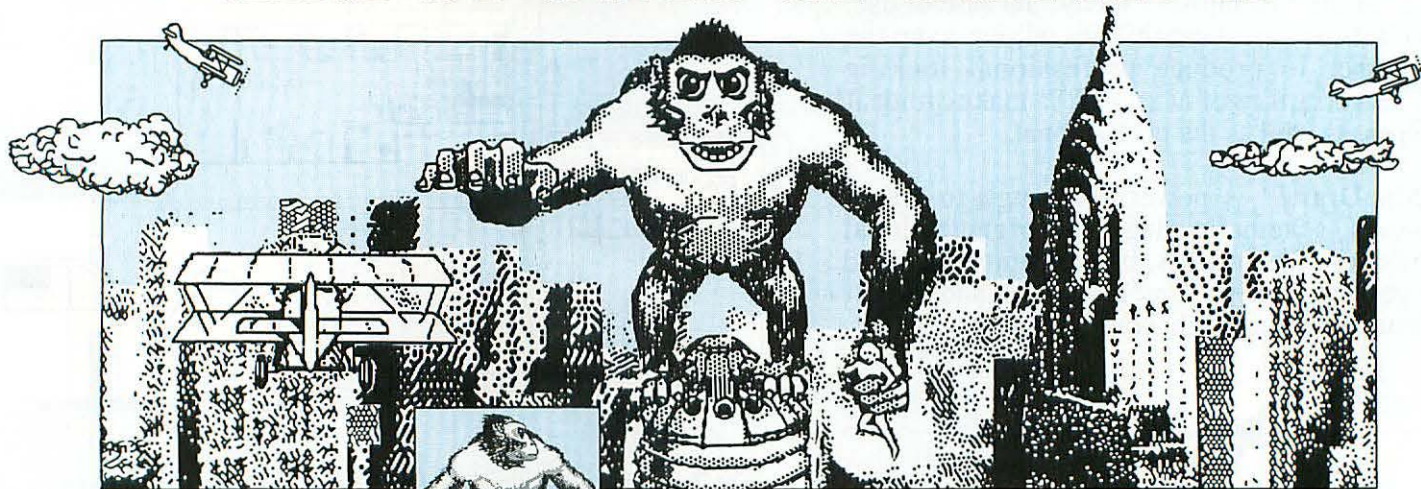
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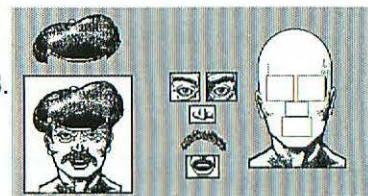
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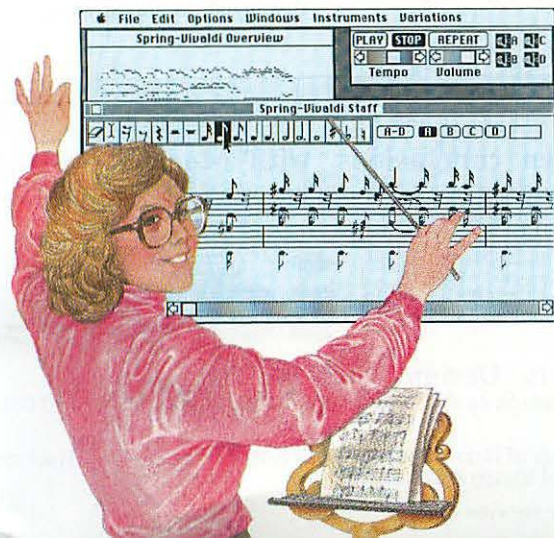
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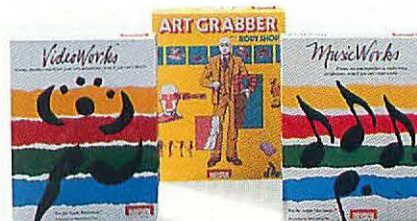
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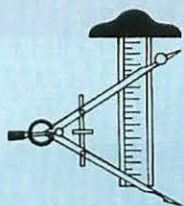
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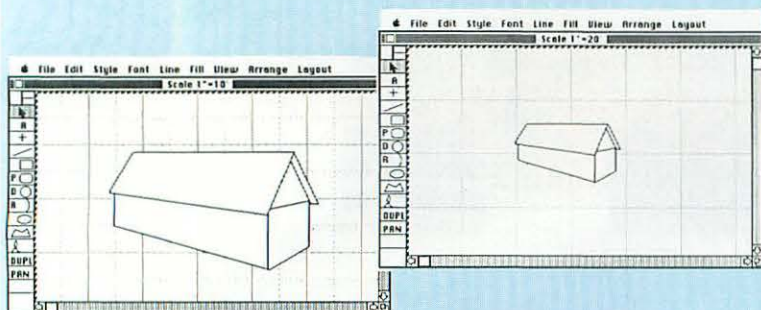
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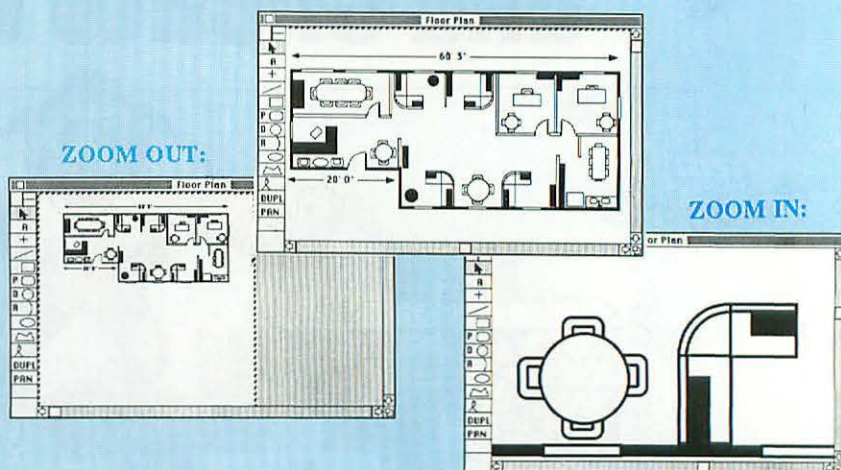
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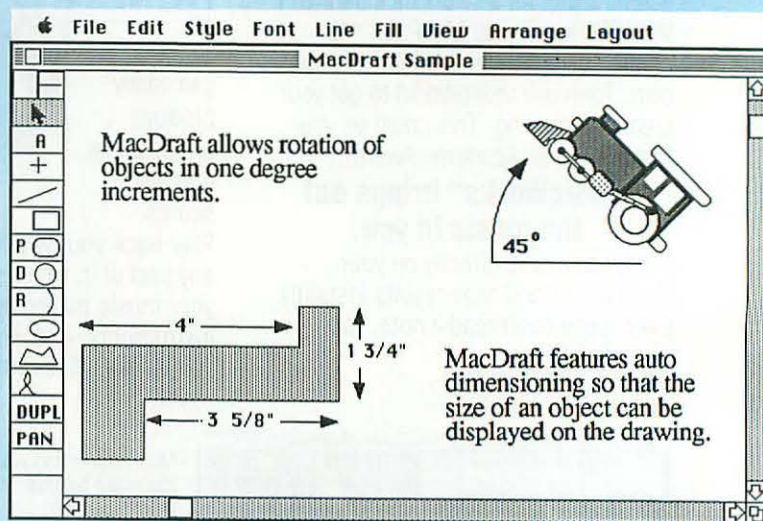
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# Late-Night Layout

**Gordon McComb**

*Macintosh sleuth Nick Lazlo is put through the wringer creating a page layout with MacDraw.*

It wasn't an unusual night. At least it didn't start that way. I sat hunched over my desk, puffing on a stale Camel, hurriedly tapping away on my Macintosh. Between the clicking of the keys I heard a muffled cough at the door. I turned slowly, body first, ready for the worst.

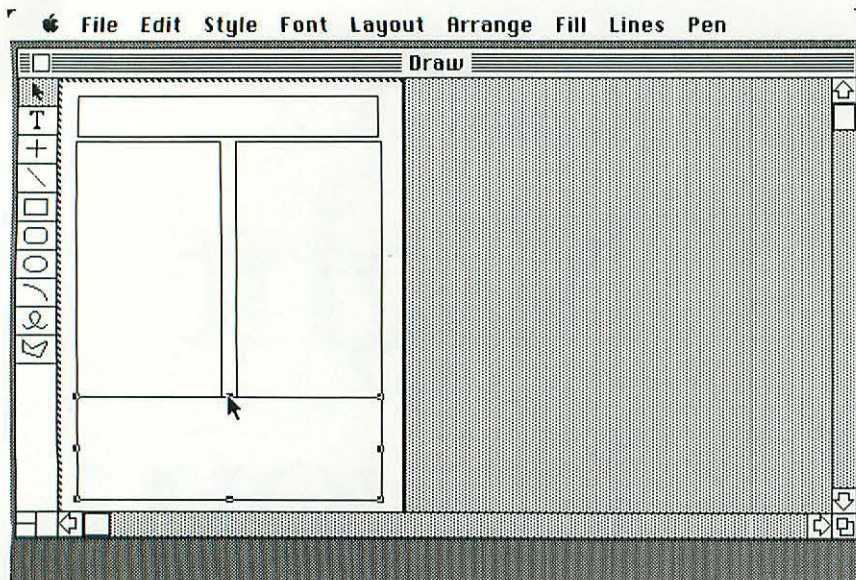
Then she appeared. Not a cold and brutal assassin of the night, but a tall and beautiful redhead with the kind of deep green eyes that can look right through you. She knocked lightly on my door, apologized for the intrusion, and then stared directly at my Macintosh. I ushered her in, offered her a cup of my brine coffee—which she wisely refused—and listened to her story.

Seems like she and her employers, a pair of eccentric inventor types, wanted to create a one-page layout using the Mac. I was ready to accept the assignment until I got wind of what they wanted: one- and two-column text on the same page, footnotes, and even a graphic stuck at the bottom. She also informed me that they wanted the page framed by a thin border, a folio rule on the top or bottom, and a thin line separating the two columns of text. I told the redhead she was crazy, that what she wanted to do was impossible, even for a seasoned Mac sleuth like me.

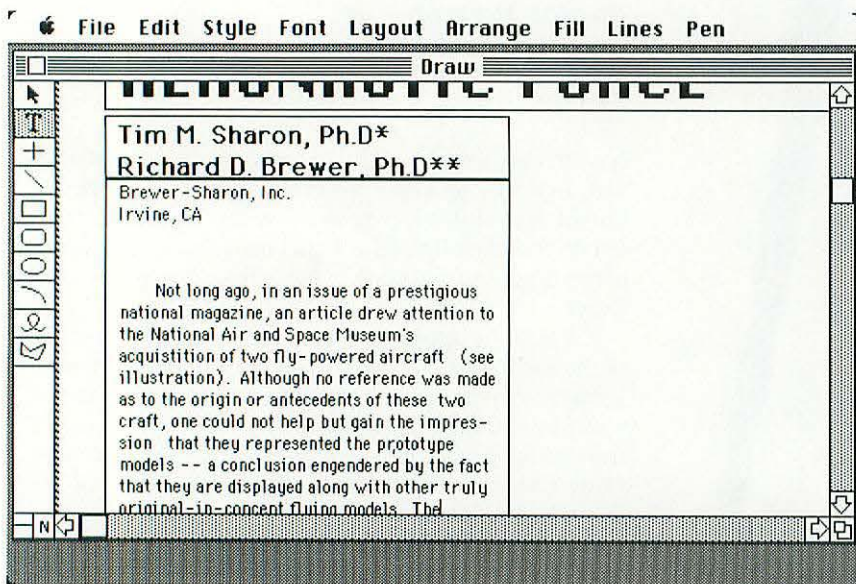
With just a moment of hesitation, the redhead flipped open her purse and pulled out a thick, white envelope. "Mr. Lazlo, inside are 50 crisp bills," she said teasingly. "Big bills. Now are you interested?" She waved the envelope alluringly in front of my eyes.

"When do I start?" I stammered.





**Figure 1**  
MacDraw isn't known for its word-processing capabilities, but for single-page layouts it can do wonders. First I outlined the layout, creating boxes with the rectangle tool.



**Figure 2**  
When I reduced the type size while typing text in one of the boxes, the previously typed text was also reduced. So I could mix fonts and sizes, I drew additional boxes.

I poured a fresh cup of coffee and sat down to figure out what program I would use to lay out the article. I didn't have the extra dough to spend on a special page-makeup program like *MacPublisher*, *Ready-SetGo*, or *PageMaker*, so I had to do the job with the programs I already owned.

I use *Microsoft Word* for most of my word processing, and I'd used it before on a similar case. Yes, *Word* was capable of integrating text and graphics, creating footnotes, and printing multiple columns of text. But I found that the program has a major drawback in doing page layouts: it doesn't format columns on the screen. Not being able to see the column layout on screen makes it tough to tell how the page will look when it's finished. In addition, positioning the different elements and adjusting the various margins on the page can take a lot of time.

I had been using *MacDraw* to make promotional flyers for my anemic business and was impressed by how easily I could create text and graphic elements and position them on the page. Although *MacDraw* is labeled an electronic drafting program, it has most of the features required for creating simple, one-page layouts. I figured it wouldn't hurt to give the program a crack at the inventors' oddball layout.

**2:10 a.m.** I popped *MacDraw* into my Mac and began work. When started, *MacDraw*'s alignment grid is turned on. I wanted to move elements on the page without locking into *MacDraw*'s invisible grid, so I flicked the grid off. To make it easier to see what I was doing, I turned off the background ruler lines and changed the view to show a reduced version of the entire 8- by 10-inch page on screen.

First I wanted to make a layout outline for the graphics and text. I chose the rectangle tool and created two large boxes for the body text and one wide box for the banner headline. Finally I made another box near the bottom of the page to hold the graphic (see Figure 1). I eyeballed the size and placement of the outline boxes, but I could also have used *MacDraw*'s rulers and Show Size features to measure and place each box precisely on the page.

**2:18 a.m.** Next I chose 36-point Geneva font, clicked the top box, and typed the banner headline. I went back to normal view to see how the text looked and saw something I didn't like. There was too much space between the two lines. I deleted the text by selecting it and tapping the Backspace key.

I wanted more control over the placement and spacing of the text, so I chose the T (for text) tool, clicked inside the top box, and typed the first line. I then clicked immediately below the first line and typed the second line.

I was a little disgusted when the background of the second line partly obscured the first line of the banner headline. I discovered that *MacDraw* automatically fills the surrounding background of each line of



text with opaque white. To make the background surrounding the two lines of text transparent, I selected both lines and chose the None pattern from the Fill menu.

**2:23 a.m.** Next I typed the first column of text. I clicked the left column box, reduced the text size to 14 points, and typed the authors' names. Then I reduced the text to 10 points and started typing the remainder of the body text, but I ran into a snag. Reducing the type size made the previously typed text shrink, too. Evidently, *MacDraw* doesn't let you mix fonts or sizes in one block of text.

To solve the problem, I made two more outline boxes. I drew a small one at the top of the left column and filled it with the authors' names. I made the second one large enough to accommodate all of the left column text (see Figure 2).

As I typed the text into the left column, *MacDraw* automatically wrapped words to fit in the box, so I didn't have to hit the Return key at the end of each line. I did the same for the second column.

But let's face it—*MacDraw* is not a word processor. The program can't do superscripts for footnoting like *Word* does. It took me a few minutes to devise a way to insert the superscripted footnote references in the text. The best solution that I found was to leave a couple of blank spaces in the text where a superscript appeared. Then, with the T tool, I made an insertion point at the blank spot and typed each footnote number separately. With only the footnote number selected, I could easily position the number precisely above the regular line of text. It looked like the real thing.

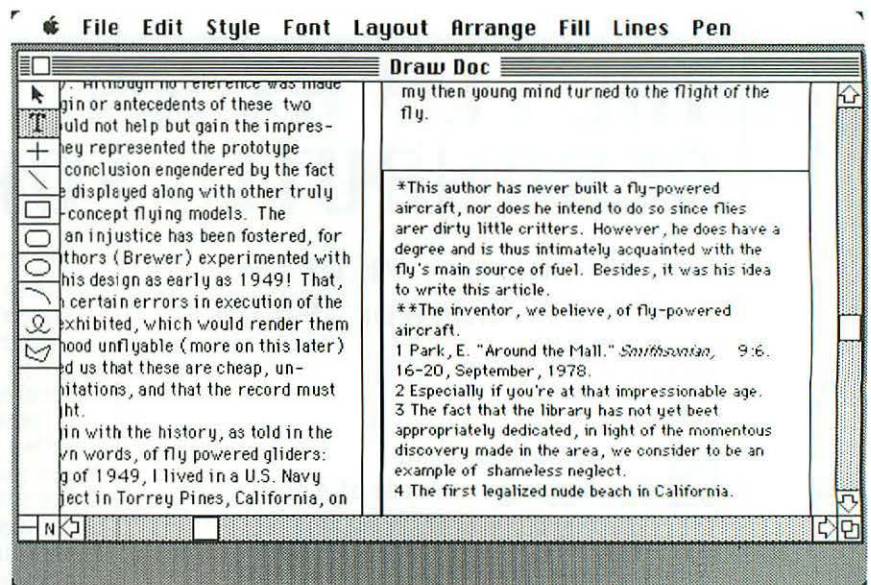
**2:45 a.m.** To finish the text entry, I made yet another box with the rectangle tool and placed it in the lower half of the right column. I reduced the text size to 9 points and put the footnote text in the box (see Figure 3).

One annoying hitch with *MacDraw* that I mentioned earlier is that if you change the font, size, or style of one word in a text block, all the text in that block changes. To make the word *Smithsonian* in the footnote text italicized, for example, I had to type it separately, italicize it, and then drag and position it over the old text. Since I had previously set the background fill to be None, the old text appeared through the new. To fix this problem I selected the italicized *Smithsonian* and chose the White pattern from the Fill menu to give it an opaque background.

**3:01 a.m.** Time for another cup of brine—and to poison the colesus.

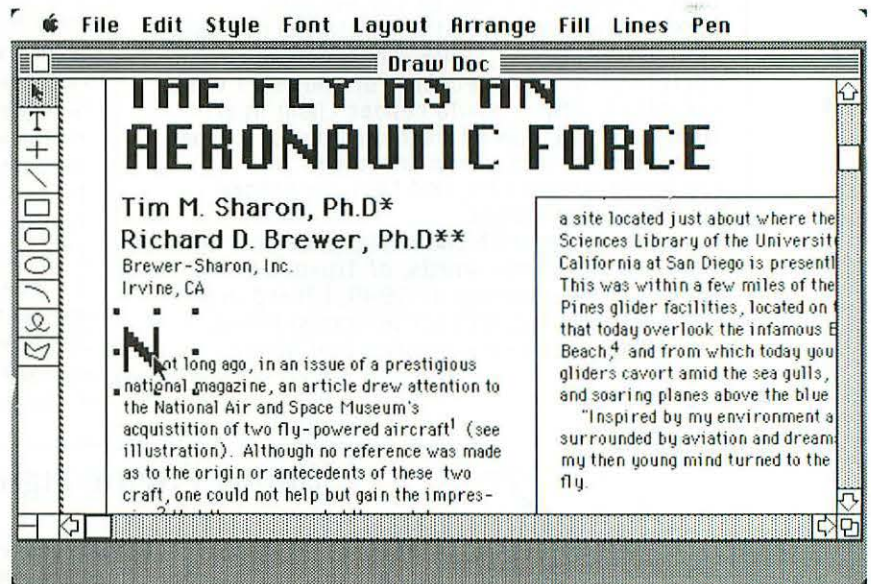
**3:17 a.m.** The layout had a two-column-wide sketch at the bottom of the page. I'm no artist, so I decided to digitize the copy of the sketch the redhead had left me. The result would be a *MacPaint* picture that I could cut and paste into *MacDraw*.

I saved the work I'd done so far, exited *MacDraw*, and pulled out my Thunderware ThunderScan digitizer. I slapped the scanner into the Imagewriter and in 10 minutes had the sketch digitized. To finish the job, I saved the graphic as a *MacPaint* document.



**Figure 3**

I made a separate box to hold the footnotes. I italicized the word *Smithsonian* by typing it outside the outline box, dragging it over the old text, and filling in its background with white.



**Figure 4**

*MacDraw* let me add a 24-point capital letter at the beginning of the first paragraph. Before I dragged the letter into place, I made sure the background fill was transparent so that the area within the black handles wouldn't cover the existing text.



# THE FLY AS AN AERONAUTIC FORCE

Tim M. Sharon, Ph.D.\*

Richard D. Brewer, Ph.D.\*\*

Brewer-Sharon, Inc.  
Irvine, CA

Not long ago, in an issue of a prestigious national magazine, an article drew attention to the National Air and Space Museum's acquisition of two fly-powered aircraft<sup>1</sup> (see illustration). Although no reference was made as to the origin or antecedents of these two craft, one could not help but gain the impression<sup>2</sup> that they represented the prototype models -- a conclusion engendered by the fact that they are displayed along with other truly original-in-concept flying models. The authors feel an injustice has been fostered, for one of the authors (Brewer) experimented with aircraft of this design as early as 1949! That, coupled with certain errors in execution of the craft being exhibited, which would render them in all likelihood unflyable (more on this later), has convinced us that these are cheap, unworkable imitations, and that the record must be set straight.

Let us begin with the history, as told in the inventor's own words, of fly-powered gliders: In the spring of 1949, I lived in a U.S. Navy housing project in Torrey Pines, California, on a site located just about

where the Physical Sciences Library of the University of California at San Diego is presently situated.<sup>3</sup> This was within a few miles of the Torrey Pines glider facilities, located on the cliffs that today overlook the infamous Blacks Beach,<sup>4</sup> and from which today young hang gliders cavort amid the sea gulls, pelicans, and soaring planes above the blue Pacific.

"Inspired by my environment and surrounded by aviation and dreams of flight, my then young mind turned to the flight of the fly. I conceived of using the common housefly as the power source for commercial aircraft."

\*This author has never built a fly-powered aircraft, nor does he intend to do so since flies are dirty little critters. However, he does have a degree and is thus intimately acquainted with the fly's main source of fuel. Besides, it was his idea to write this article.

\*\*The inventor, we believe, of fly-powered aircraft.

1 Park, E., "Around the Mall," *Smithsonian*, 9:6, 16-20, September, 1978.

2 Especially if you're at that impressionable age.

3 The fact that the library has not yet been appropriately dedicated, in light of the momentous discovery made in the area, we consider to be an example of shameless neglect.

4 The first legalized nude beach in California.

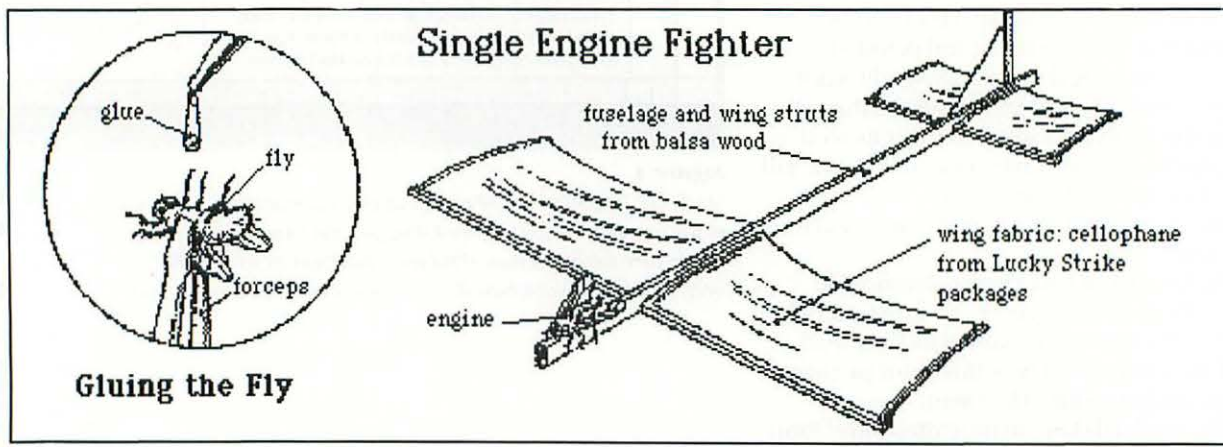


Figure 5

I spent about 2 hours doing this layout with MacDraw. I was able to add all of the graphic embellishments requested and saved the outline for future use.

"The Fly as an Aeronautic Force" is adapted from *The Best of the Journal of Irreproducible Results*, edited by Dr. George H. Scheer, © *The Journal of Irreproducible Results* and Barry A. Scheer, Workman Publishing, New York, 1983. Illustration by Ed Lipinski.



I was about to exit the ThunderScan software when it hit me: the graphic was 7 inches wide, but *MacPaint* can't select an area for cutting or copying that's wider than 5½ inches. I thought I'd backed myself into a blind alley. Then I remembered that I didn't need to copy the image to *MacPaint*; the ThunderScan software lets you select the entire graphic with its marquee. I breathed a sigh of relief, copied the digitized sketch to the Clipboard, and headed for *MacDraw*.

Once back in *MacDraw*, I pasted the graphic in at the bottom of the page.

**3:47 a.m.** To finish the layout, I needed to delete the outline boxes. I selected each one and pressed the Backspace key to erase it. I then used *MacDraw*'s line tools to frame the text and graphic and to add the border, folio rule, and other graphic embellishments. Finally, I typed a single capital *N* in 36 points, as shown in Figure 4, and moved it to the beginning of the first paragraph.

**3:55 a.m.** I fired up my Imagewriter (for lack of a LaserWriter) and did a test print of the *MacDraw* layout. A strange glitch appeared in the printed document: the text in the columns had mysteriously re-wrapped. Lines as printed on the Imagewriter didn't end at the same place as they did on screen.

When it prints in Tall mode, the Imagewriter has a slightly greater horizontal resolution than the Mac's screen; it looked like *MacDraw* was adjusting the text to the expanded resolution of the printer. To correct this I called up the Page Setup dialog box and changed

the orientation from Tall to Tall Adjusted, which adjusted the printer's resolution to the screen's. The finished *MacDraw* layout is shown in Figure 5.

Total time with *MacDraw* was less than 2 hours. Happily, I discovered that *MacDraw* makes it easy to save the layout for future use. All I had to do was keep the layout outline and add the proper borders, columns, and folio rules. I could then use the dummy as the basis for laying out subsequent pages.

While *MacDraw* can accept text cut from a word processing program, it can't place that text within the boundaries of a box. That's about its only disadvantage.

**5:18 a.m.** It was getting light out when I called the tall redhead with the unfathomable green eyes and told her the case was closed, all of her problems were solved. Fifteen minutes later, there she was again, standing at the doorway, her hair glowing in the morning sun that peeked through the venetian blinds.

I handed over my report and reminded her of my payment. She pulled the white envelope from her purse and tossed it carelessly onto the table. With a quiet thanks, she left. I watched her walk the length of the hall and get in the elevator. I never saw her again. That's how it is in this business. □

————— Gordon McComb is  
a Contributing Editor of Macworld.



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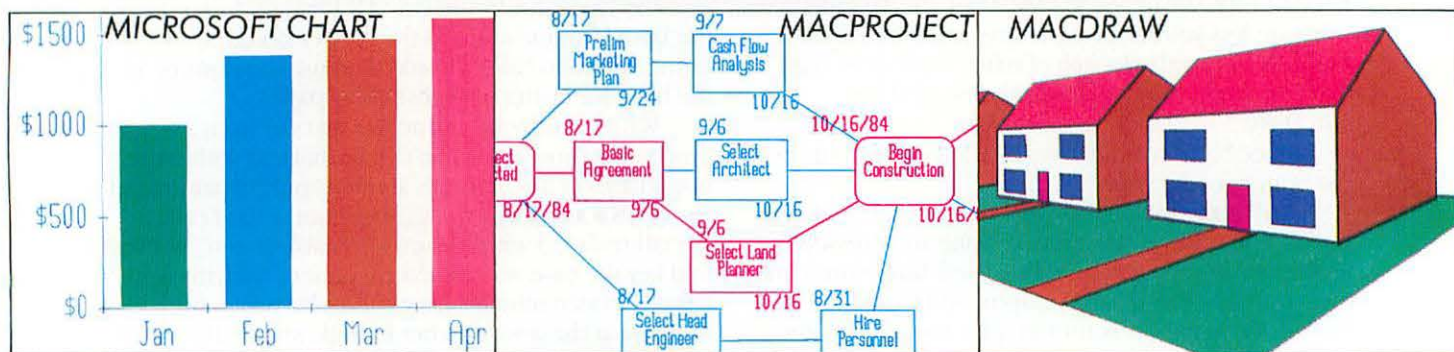
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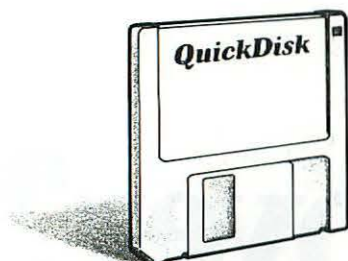
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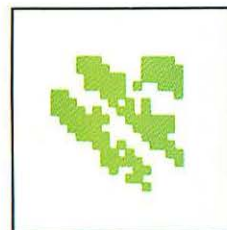
# Mining the Mac's Hidden Resources



*Gordon McComb*

Walk into any office, and you'll see signs of personalization. Everything from the pictures on the wall to the collage of notes on the lamp helps to personalize an oftentimes sterile and uninviting workplace. Though the Macintosh desktop is more inviting than the screens you get with most computers, there's always room for a little customization. Adding your own icons, modifying the existing ones, or changing some of the dialog boxes and menus can help make your Mac unique.

The key to customizing the Mac's electronic desktop and applications is a new utility program from Apple called *ResEd*, which stands for *resource editor*. With this program you can change the names of commands, redraw icons, add new command keys to menus,



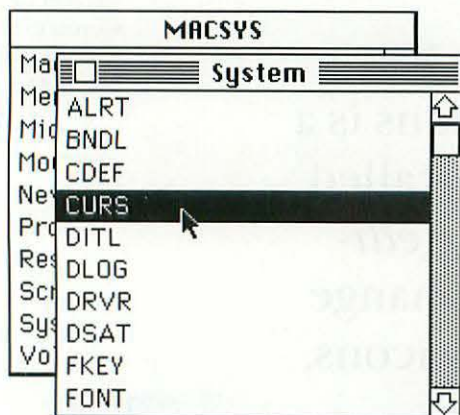
The bold *MacPaint* brush stroke at left was made with the brush tip above. The brush was custom-designed using *ResEd*, one of two utility programs that let you alter the Mac's resources to better suit your work or personality.



Resource Type	Meaning
ALRT	Alert box template
BNDL	Bundle
CDEF	Control definition function
CNTL	Control template
CODE	Application code segment
CURS	Cursor
DITL	List of items in a dialog or alert box
DLOG	Dialog box template
DRVR	Desk accessory or other device driver
DSAT	System startup alert table
FKEY	⌘-Shift-number routine
FONT	Font
FREF	File reference
FRSV	Font reserved for system use
FWID	Font widths
ICN#	Icon list
ICON	Icon
INIT	Initialization resource
INTL	International resource
KEYC	Keyboard configuration
MBAR	Menu bar
MENU	Menu
PACK	Package
PAT	Pattern
PAT#	Pattern list
PDEF	Printing code
PICT	Picture
PREC	Print record
STR	String
STR#	String list
WDEF	Window definition function
WIND	Window template

**Table 1**

Resources are identified by a four-letter code called a resource type. Three-letter types, such as PAT and STR, include a trailing space.



**Figure 1**

When you open a file in ResEdit, you're greeted with an alphabetical list of resources. You can open a resource by double-clicking its name.

rewrite the messages that appear in dialog and alert boxes, change the brush tips in *MacPaint*, and edit and create fonts.

In short, *ResEdit* is a Mac of all trades that allows you to customize applications, finally letting you have it your way. You can't change everything with *ResEdit*, mind you, but it gives you far greater control over the Mac than you've ever had.

Now for the best news: *ResEdit* is free. It's available at no charge from MicroNet Apple User's Group (MAUG) on the CompuServe information service, as well as from other user groups around the country. Here's a quick peek at what *ResEdit* can do and the many ways you can take advantage of its power.

## Natural Resources

All Macintosh applications, such as *MacPaint*, *MacWrite*, and the Finder, as well as the System files, are made up of discrete building blocks called resources. Fonts, icons, patterns, and menu commands are examples of resources. *ResEdit* opens the doors to these resources so that you can make changes.

Here's an example. Start up *ResEdit* and open the System file on an application disk; you'll see a listing of resources (see Figure 1). The resources are coded: BNDL, CURS, DITL, DRVR, and so forth. Table 1 explains what each of the editable resource codes represents.

Open the resource labeled CURS, for instance, and you access the holding tank that stores the various cursor, or pointer, shapes for the mouse (one pointer shape that's notably absent is the arrow, which is generated by the Macintosh itself). Double-click on the wristwatch pointer, and you can edit it or redraw it completely (see Figure 2).

To keep track of the multitude of resources within each application, *ResEdit* assigns each resource an identification number. To change the number, select a resource and choose the Get Info command from the File menu. An edit box appears, allowing you to type in a new number.

You can often use the identification numbers to your advantage. Instead of editing the wristwatch, you can redesign the icon from scratch and give the new icon the same number as the wristwatch. Be



sure to renumber the wristwatch first, so you don't confuse the Mac. When the arrow is supposed to change to a wristwatch, the Finder simply grabs the pointer with the identification number 4, no matter what the pointer looks like.

Note that only applications and certain Mac files—including the System, Finder, Scrapbook, and Imagewriter files—have editable resources. Documents created by applications such as *MacPaint* and *MacWrite* don't have resources of their own and can't be manipulated by *ResEd*.

That doesn't mean *ResEd* can't tap into all documents. It can easily open and manipulate Font Mover documents, for example. You can even use *ResEd* to install fonts in the System file. In addition, *ResEd* creates documents of its own, which you can use to store resources that you've cut or copied.

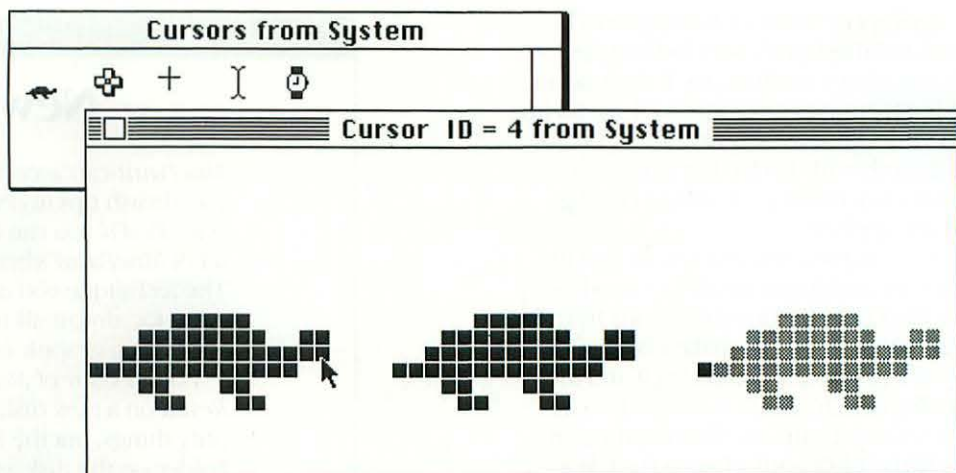
### Up and Running

Using *ResEd* is simple, but it's not foolproof. Because the program is not yet free of bugs, it can crash unexpectedly, and the work you've done is lost forever. If the program crashes while it's saving work to disk, it will most likely ruin beyond salvage the file you've been editing. You can save yourself a lot of agony if you work only with copies of your applications. With practice you'll learn the limitations of *ResEd*.

To get *ResEd* up and running, make a copy of it and the files you want to edit and put them all on one disk. Open *ResEd*, and a small window appears displaying the editable files on the disk. To open a file, double-click on it. To get to some resources, you have to open several windows (see Figure 3). Quite often resources are embedded within other resources, in the same way that folders on the Macintosh's desktop can reside within other folders.

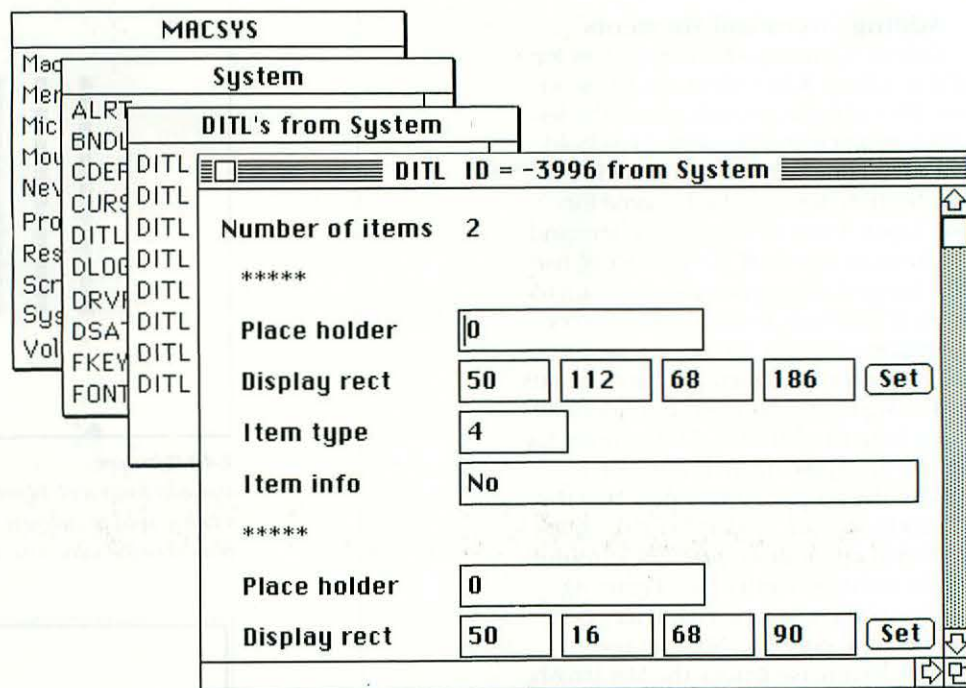
If the file you want to edit is on a different disk from the *ResEd* disk and you have a two-drive Mac, insert the new disk in the external drive. That disk's directory window will appear. To eject a disk, locate its directory window and click its close box. If you have a single-drive Mac, you can still work with two disks, but you'll have to swap them in and out of the drive.

Some of the resources you open may reveal a window full of strange numbers. The numbers represent resources, such as application code, that have no template. While you can edit these numbers, it would do you no good, because there's no way to know what you're doing.



**Figure 2**

You can use *ResEd* to design cursors, otherwise known as pointers. To create a new pointer, draw it on the left side of the edit window. Then choose the *Data→Mask* command from the *Cursor* menu to make an opaque background for the pointer shape.



**Figure 3**

Many resources are embedded within other resources, and you must open several windows to uncover the information you want to edit. DITL resources, as shown here, control the selector buttons in alert and dialog boxes.



A template allows information to be edited and displayed in a window filled with edit boxes and buttons. If the information is a picture or an icon, you'll see its image in the window. Pictures cannot be edited directly with *ResEd*, but icons can. Double-click on an icon, and an editing template appears.

You can pass resources from one file to another and from one disk to another by using the Cut and Copy commands from the Edit menu. You can make a backup copy of a resource by selecting it and then choosing the Duplicate command. To delete a resource without affecting the contents of the Clipboard, choose the Clear command.

When you finish editing, close each window. As you close the window of the resource file, you are asked if you want to save your work. This is your last chance to change your mind; if you made a mistake and want to return a resource to its original state, choose the Revert command from the File menu.

### Adding Command Shortcuts

One of the most outstanding uses for *ResEd* is adding  $\mathbb{A}$ -key shortcuts to menu items. For example, you can assign the letter Q to mean *Quit*. Then when you hold down  $\mathbb{A}$  and press Q, you can quickly exit an application. You can do the same for Close, Open, Print, or any other command.

To create or edit  $\mathbb{A}$ -key shortcuts, use *ResEd* to open the application you want to change. If you want to edit the menus on the desktop, open the Finder. Locate the MENU resource and open it; a list of menus appears. Menus are numbered sequentially starting from the left side of the screen; for example, the Apple menu is number 1.

With the proper menu open, find the command you want; under it you'll see a box labeled *keyBoard equiv*. Click inside that box and type a letter (see Figure 4). Though space for several characters is available, type only one. You can use upper- or lowercase letters; the Macintosh treats them the same. If you run out of letters, use a symbol or one of the Option characters.

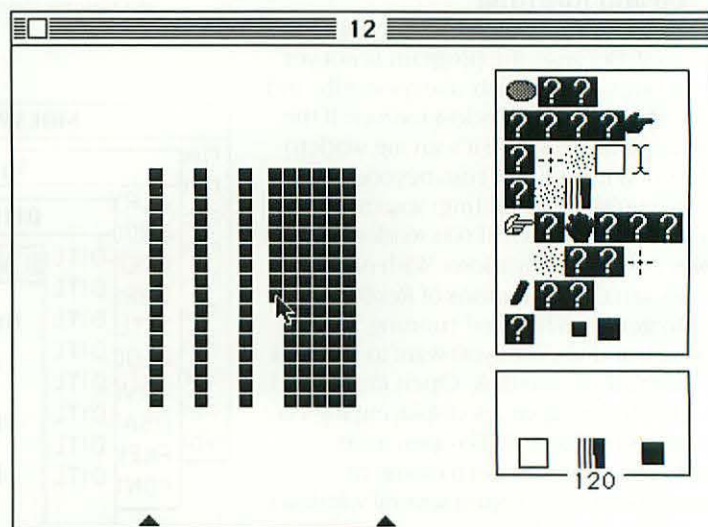
## New Brush Tips

*MacPaint* can accommodate 32 paintbrush tips at one time. With *ResEd* you can edit any or all of *MacPaint*'s brush shapes. The technique you use is the same for almost all resources containing graphic images.

Place a copy of *MacPaint* and *ResEd* on a new disk. To simplify things, put the System Folder on the disk as well. Start *ResEd* by double-clicking on its icon.

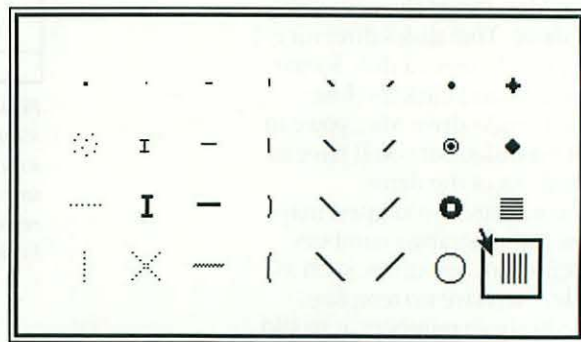
With *ResEd* running, double-click on *MacPaint*. A new window opens, revealing all the resources that make up the *MacPaint* application. Find the entry labeled FONT and open it. *MacPaint* has only one font of its own, called 12. The writing fonts, which are separate resources, are stored in the System file.

Open 12, and the font editor window appears. A close-up of the character that is currently selected appears in the center of the window. The large box



### Edit Window

You edit fonts with *ResEd* in the same way you use *FatBits*. Click to add or delete dots. The results are immediately displayed in the selection rectangle.



### Tip Selection

Choose the tips in the usual manner by clicking the one you want.



on the right shows a sample of the character (with most other text fonts it reads, "The quick brown fox jumped over the lazy dog"). The small box in the lower-right corner is for selecting the character to edit. The two triangles on the bottom of the window control the spacing of characters and should be left alone when you edit *MacPaint* brush tips.

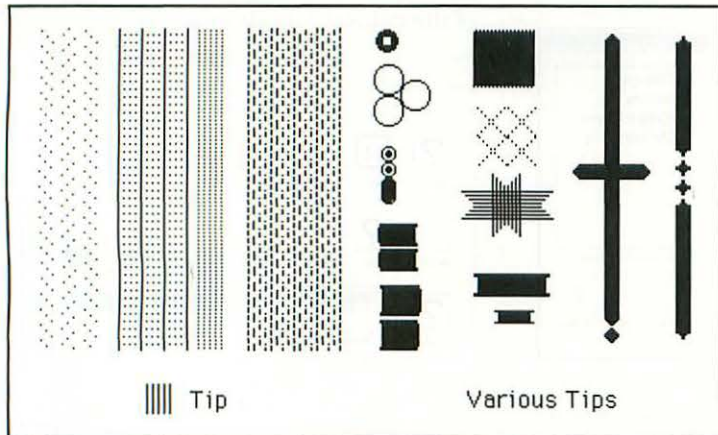
*MacPaint* font 12 contains more than brush tips. It also houses the tools from the Tool Palette and the pointer shapes. Editing those, however, produces no effect. The brush tips start at character position 120 and continue to position 151. Scroll through the characters by clicking on either side of the selection rectangle. It's best not to edit the large square tip (number 120), because *MacPaint* uses that tip for the eraser tool. Changing tip 120 alters the shape of the eraser.

Editing brush tips is like using FatBits: click and drag to add or delete dots (see "Edit Window"). The new version of the tip is shown in the selection rectangle.

Repeat the selection and editing process for each tip you want to modify. When you finish, close the windows and click "yes" to save your work when the dialog box appears. Quit *ResEd*.

It's a good idea to rename the modified version of *MacPaint* so you know you're using the one with your own custom assortment of brush tips. Call it *MacPaint Tips* or some other descriptive name.

When you use your custom version of *MacPaint*, select the brush tips as usual. Experiment with using your new tip shapes, and don't be shy about trying different patterns. For example, "Tip Selection" shows the large square tip turned into a series of vertical lines. When painting from right to left, the new tip doesn't do anything different. But when you paint up and down (see "Custom Tips"), you lay down a coat of striped paint. Choose a new pattern, and you get a different texture.



#### Custom Tips

Design custom brush tips to suit your needs. You can create tips to produce evenly dashed lines, unfilled or partially filled circles, jagged-edged boxes, I-beams, and more.

While the menu resource is open, you can also change the names of commands by clicking on the menuitem box and typing in the new names. Don't worry about the length of a name; the menu automatically expands. To fit more text on a given line, you can compress the text by clicking the 1 button in the row labeled *condense*.

Removing unneeded desk accessories frees up disk space. Use *ResEd* to open the System file, then look for the *DRVr* entry. Open it, and you see a list of the desk accessories currently on the disk. To delete an accessory, select it and choose Clear from the Edit menu. You must leave at least one accessory. The accessory labeled *.Print* is required to print screen shots when you press  $\text{⌘}$ -Shift-4; it should not be deleted if you want to retain that capability.

You can also use *ResEd* to rename a desk accessory. Making your own help screens is a good use of this ability. Create a set of screens with an application such as *MacPaint* or *MacWrite*, and paste the screens into the Scrapbook. Using *ResEd*, rename the help screens by selecting the Scrapbook and choosing the Get Info command from the File menu. Type a new name, such as Help! To call up your help Scrapbook, select the new entry in the Apple menu.

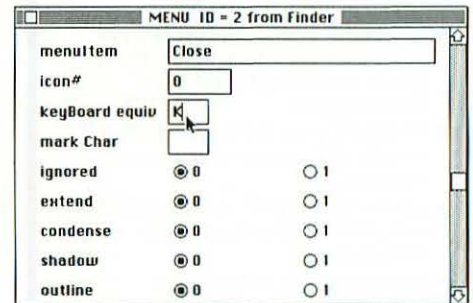


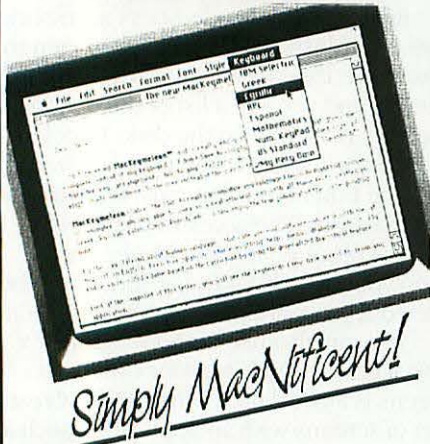
Figure 4

Every Macintosh menu item can have a  $\text{⌘}$ -key shortcut. To add a shortcut, open the MENU resource in the Finder or application file. You can also change the style of text within menus. Click the 1 button opposite the style or styles you want to use.



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### Font Editing

If you want to modify an existing character or add a special character to one of the Macintosh's fonts, *ResEd* will do the job. All of the Mac's writing fonts are stored in the FONT resource, which is located in the System file. Open it, and a full list of all the available fonts in all their sizes appears. Double-click on a font, and you see a font-editing template.

Use the template like *MacPaint*'s *FatBits*. Click inside the large window to lay down or pick up dots. To edit another character, either type it from the keyboard or use the mouse to scroll through the list of characters in the box in the lower-right corner. Click on either side of the selection rectangle to step through the alphabet, or drag the selection rectangle to scroll quickly forward or back.

To create an entirely new character (see Figure 5), use the Key Caps desk accessory to find an unused Option or Shift-Option key, like Option-K. Type it on the keyboard; the large window in the center of the template will go blank, and you can draw the new character.

*ResEd* gives you some creative freedom when you work with fonts. If you want to change the spacing of characters, drag either of the black triangles located along the bottom edge of the font window. In this way you can transform New York, a proportionally spaced font (in which *i*'s take up less space on the line than *w*'s), into a monospaced font. You can increase the vertical line spacing by choosing the More Ascent command from the Height menu, which appears only when you're editing fonts. You can also decrease spacing be-

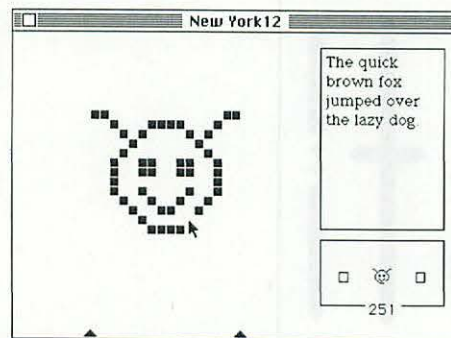


Figure 5

*ResEd* lets you edit existing font characters or make your own. To create a new character, select an unused Option key (so you don't destroy a character you may want to use). You draw the new character a dot at a time, as in *MacPaint*'s *FatBits*.

tween lines by choosing Less Ascent and Less Descent, but don't go too far, or you'll start to lop off the tops and bottoms of the characters.

For a new twist, use *ResEd* to open *MacPaint*, which has a FONT resource of its own. *MacPaint*'s FONT resource creates its 32 brush tips rather than text (see "New Brush Tips" for more details).

Another practical application of *ResEd* is to alter patterns. The patterns are used to create the Mac's desktop, the pattern palette in *MacPaint*, and even the Fill and Pen menus in *MacDraw*, which are not changeable except with *ResEd*.

### Going International

If you need to tailor the Macintosh for use abroad, you'll want a copy of *REdit*, a resource editor written by Gerard Schutter of Apple's Macintosh International Marketing Group. Like *ResEd*, *REdit* is available from CompuServe's MAUG and other user groups. Though *ResEd* allows you to change dates, times, or numbers, *REdit* is even more suited to this task and includes additional features:

- Resources are displayed as icons (see Figure 6).
- You can resize a window resource (WIND) by simply dragging a size box.
- You can decompile a resource file into a text file for editing or transmitting via modem.
- If you need to edit a resource for which no template exists, you can view the data in hexadecimal or ASCII.

In addition, *Localizer*, a utility that comes with *REdit*, enables you to quickly change the keyboard configuration and the date, time, and currency formats to those of the country you choose.

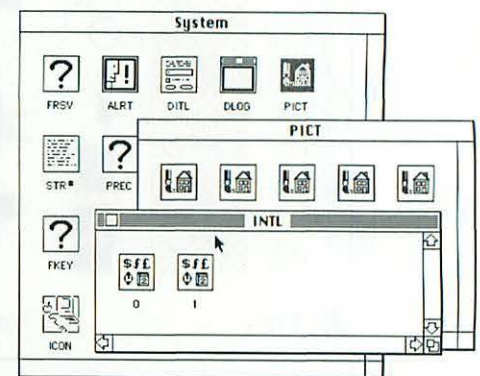


Figure 6

*REdit* is a valuable tool for editing string resources (STR), menus (MENU), windows (WIND), dialog or alert boxes (DLOG or ALERT), controls (CNTL), icons (ICN), and the international resource (INTL). *REdit* displays resources as icons.

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### Tip of the Resource

One extracurricular project you may want to try is editing the icons in the ICON and ICN# resources, which are located inside applications, the Finder file, and the System file. If you don't want to bother drawing your own icons, MAUG provides several exhaustive resource editor documents chock-full of images.

You can also edit the text in dialog and alert boxes. You might want to change the text if you're creating a custom Macintosh desktop or application for others in your office, school, or home. You could add some humor or rewrite a message to make it easier to understand.

With *ResEd* you can even change the picture you get when you choose About the Finder from the Apple menu. You can use any picture from the Scrapbook. If the picture is bigger or smaller than the About the Finder window, the Mac shrinks or expands it to fit. To change the picture, just replace the PICT resource in the Finder file.

Finally, should you want to spice up your menus, you can use *ResEd* to add icons beside one or more of the commands. Injecting icons into menus is more than just show; it can make the Mac and its applications even easier to learn and use. You could create a special child's version of *MacPaint*, for example, in which each command would be displayed with a descriptive picture.

These are just a few of the things you can do with *ResEd*. Don't be afraid to experiment; just be sure you do it with replaceable copies of disks. And besides customizing applications to suit your tastes, *ResEd* can help you learn more about how the Mac works. □

— Gordon McComb is  
a Contributing Editor of Macworld.

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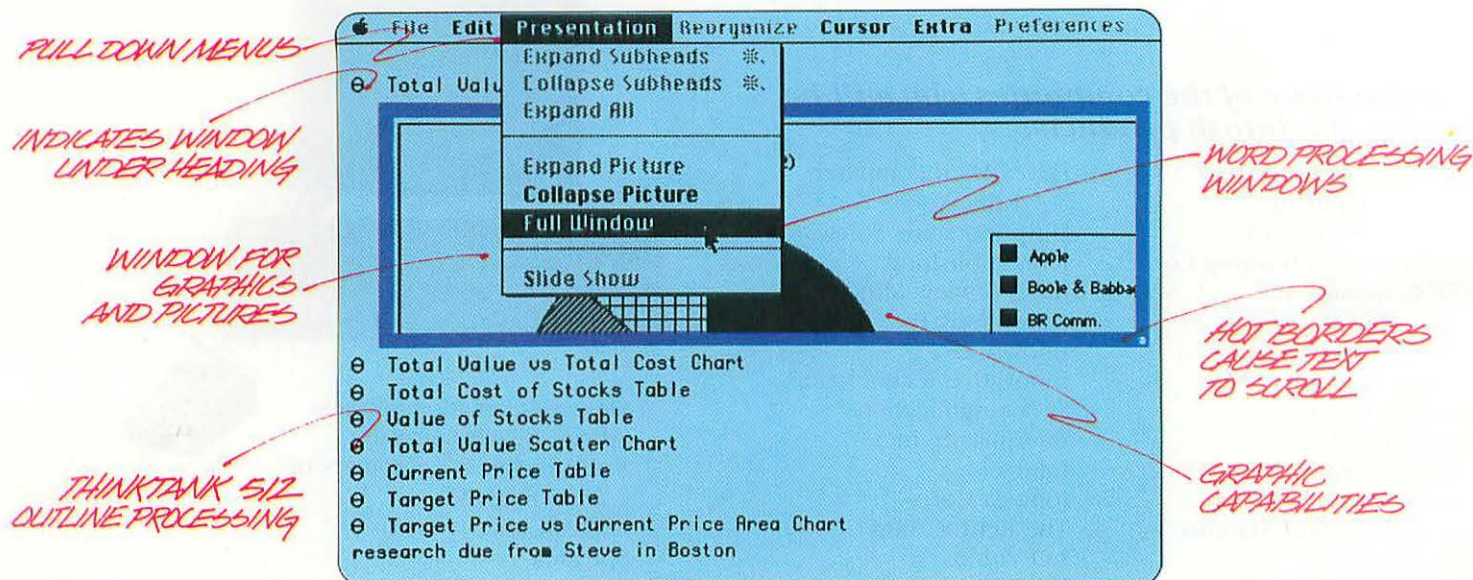
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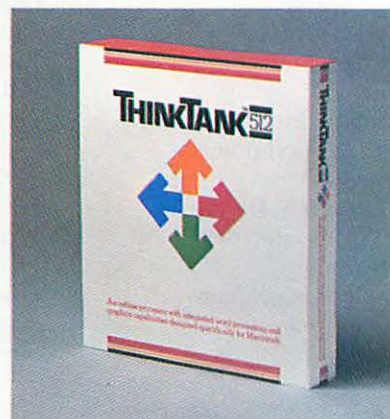
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# Open Window

*Edited by Jim Heid*

## *Sound waves, Model 100 update, draft printing, and more*

*This month's Open Window includes another update on the Macintosh and Tandy Model 100 compatibility issue, as well as a technique for obtaining better-looking draft-quality text. We also provide a Microsoft BASIC program that lets you experiment with the Mac's sound synthesizer, two MacPaint tips that simplify entering and formatting text, and some observations concerning Microsoft Word.*

### **Model 100 Update, Part II**

I've followed with interest the *Open Window* tips concerning the Macintosh's compatibility with Tandy's Model 100 portable computer [see *Open Window, Macworld*, December 1984 and March 1985]. I, too, was disappointed to discover *MacTerminal*'s inability to convert carriage-return codes into carriage-return/line-feed codes. After numerous inquiries, however, I found a simple solution to the problem:

- Start the Model 100's BASIC by pressing the Enter key while the main menu is displayed.

- Type **POKE 63066,255** and press Enter. This statement alters one byte of the Model 100's memory; make sure you alter the right byte by proofreading your typing before pressing Enter.

The statement causes the Model 100 to send line-feed codes along with carriage-return codes, eliminating the overwritten text problem. The altered memory location remains altered until you perform a "cold start" on the Model 100, which clears all files from memory, or until you enter BASIC and execute the statement **POKE 63066,0**.

*Peter Vaktor  
Montreal, Quebec  
Canada*

### **Better Draft Printing**

The draft printing feature in most Mac applications is often criticized for its irregular word spacing. The odd spacing occurs because draft printing is designed to simulate the spacing you get from the standard and

high-quality print features. You see the words exactly where they appear on the screen; however, the spacing is irregular because draft printing uses a monospaced Imagewriter font, in which all characters are the same width, instead of a proportionally spaced Macintosh font [see "The Imagewriter and Beyond," *Macworld*, September/October 1984].

The solution to the problem of irregular spacing is simple. Select the entire document and change the font to Monaco just before printing. Since Monaco is a monospaced font, the resulting draft printing is properly spaced and much easier to read than drafts in other fonts. You can even get different sizes of draft printing by changing the font size. Monaco in 14-point, for example, looks bad on the screen but produces an acceptable draft font. "Draft Printing Sizes" shows samples of draft output from the Imagewriter in four sizes.

To avoid spacing problems with this technique, remember these rules: use only one font size per line, don't use graphics, and use only plain, bold, or underlined text (no italics, shadowing, and so on). Remember to save a document before you change its font to Monaco, and avoid printing right-justified text. The right margins will not line up perfectly, although they will be close.

*Scott Newman  
Cedar Park, Texas*

### **MacPaint Text Formatting**

*MacPaint*'s text editing and formatting features are limited, to say the least. The program doesn't let you specify line widths, and it lacks word wraparound—two shortcomings that make it difficult to fit a block of text into a given space without much trial and error.



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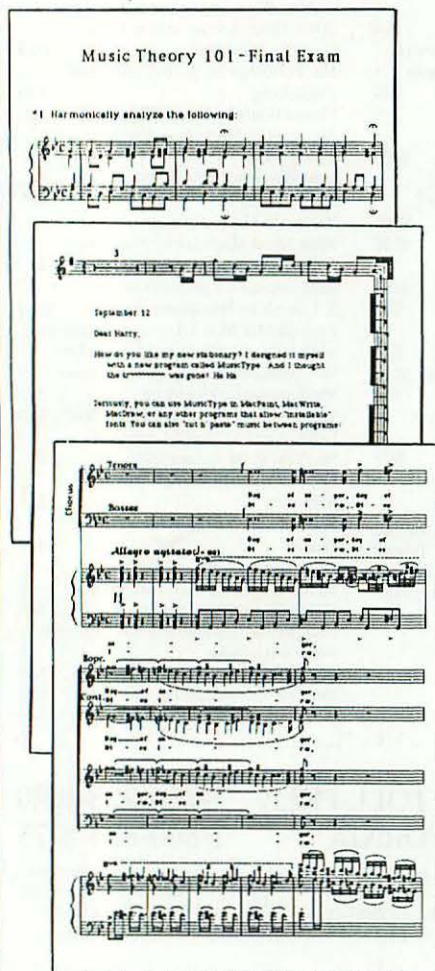
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I've found an undocumented feature of *MacPaint* that overcomes these drawbacks. The trick involves using the Note Pad to enter text, then copying the text and pasting it into a *MacPaint* document:

- Open the Note Pad by selecting its name from the Apple menu.
- Type the text that you want to insert into the document.
- Select the text by dragging across it, and choose Copy from the Edit menu.
- Start *MacPaint*. If *MacPaint* is already up and running, close the Note Pad to return to your drawing.
- Choose Paste from the Edit menu. The text, now enclosed in a marquee, appears in the drawing window.
- Resize the marquee by positioning the mouse pointer within the marquee, holding down the ⌘ key, and dragging. As the marquee's size changes, the text's line

endings are changed to fit [see "MacPaint Text"]. You can also change the text's font, size, style, and alignment.

The technique has one limitation: a single Note Pad page is limited to a maximum of 256 characters. If a block of text is longer, use *MacWrite* to type and copy it, then quit *MacWrite*, start *MacPaint*, and paste.

Bill Wharrie  
Waterloo, Ontario  
Canada

### More MacPaint Text Tips

*MacPaint* was never meant to be a word processor, but I've heard many complaints about the limitations of the program's text option. Let's face it, it's next to impossible to line up the text-insertion pointer with text you've already typed once you've clicked the mouse button. For example, if you're typing along in 12-point plain New York and want to insert an italicized word

(continues on page 152)

### Draft Printing Sizes

To avoid the irregular spacing that occurs when you print a document in draft quality, change the document's font to Monaco before printing. Since all characters in Monaco are the same width, the resulting draft is properly spaced.

This is 9-point Monaco in draft quality. N  
This is 12-point Monaco in draft qua  
This is 14-point Monaco in dra  
This is 16-point Monaco in

### MacPaint Text

For more text-formatting flexibility in *MacPaint*, type text using the Note Pad, then copy and paste it into your document, where it appears within a marquee. When you resize the marquee by holding down the ⌘ key and dragging, the text's line endings are changed to fit. You can also change the text's font, size, and style.

The line endings are changed as you resize the marquee.

The line endings are changed as you resize the marquee.

The line endings are changed as you resize the marquee.





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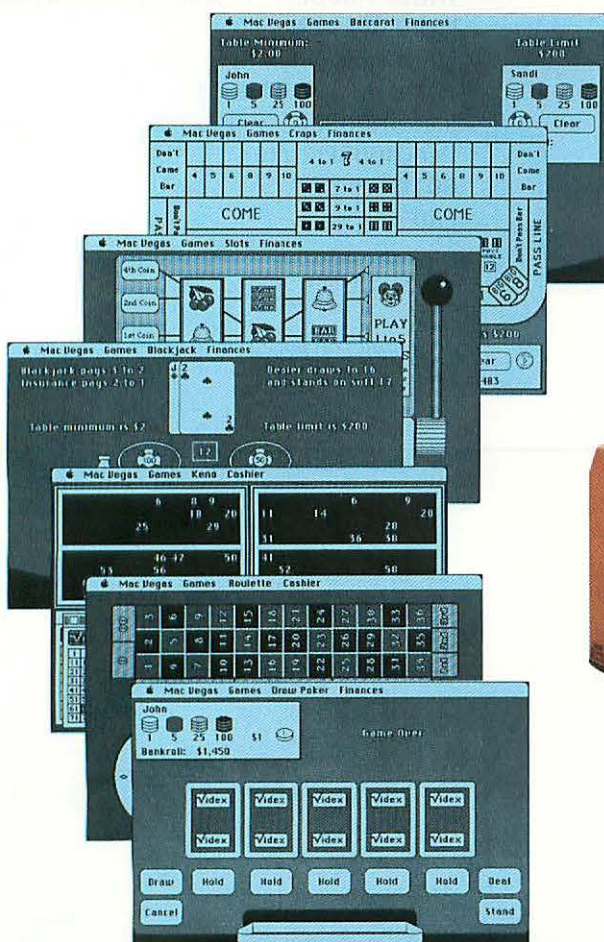
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## Waveform Listing

This MBASIC program enables you to use the mouse to design wave forms for each of the Mac's four voices.

```
' WAVEFORM - ©1985 by Michael Blake

' Use the mouse to generate waveforms
' for the four voices
' Use the mouse to play various notes
' using the waveforms

' initialize

DEFINT a-z
DIM nwave(256),VoiceSet(3),vwave(3,256)
GOSUB Menuini
inote=440 ' Freq of first note
ilen=9 ' Duration of note (in units of 1/18 sec)
ivoice=0 ' First voice used
AutoDraw=1 ' AutoDraw when voice changed.
rdstep=2 ' step used to redraw waves

' Set up new form loop

NewForm:
GOSUB ShowVoice
GOSUB DrawHelp
GOSUB ClearWindow
WHILE MOUSE(0)<>0:WEND ' Flush buffer

' Have user Draw Wave

WHILE MOUSE(0)=0:WEND
xm=ABS(MOUSE(1)):ym=ABS(MOUSE(2))
IF xm>255 THEN xm=255
IF ym>255 THEN ym=255
CALL MOVETO(xm,ym)
nwave(xm)=ABS(ym)
WHILE MOUSE(0)<0
xm=ABS(MOUSE(1)):ym=ABS(MOUSE(2))
IF xm>255 THEN xm=255
IF ym>255 THEN ym=255
CALL LINETO(xm,ym)
nwave(xm)=ym
WEND

' Put wave in wave array
' (Uses real dumb 'interpolation scheme'
' of keeping previous value
' 'til a new one occurs)

CLS
GOSUB ShowVoice
GOSUB ClearWindow
CALL MOVETO(0,nwave(0))
FOR i=0 TO 256
IF nwave(i)=0 THEN nwave(i)=nolc
ELSE nold=nwave(i)
CALL LINETO(i,nwave(i))
vwave(ivoice,i)=nwave(i)
nwave(i)=nwave(i)-128
NEXT i
WAVE ivoice,nwave,0
voiceset(ivoice)=-1
GOSUB SoundHelp

' replay loop

Replay:
WHILE MOUSE(0)<>0:WEND
GOSUB ShowFreq
SOUND inote,ilen,ivoice
MENU ON:MENU 1,0,1
mitem=0
WHILE MOUSE(0)>=0 AND mitem=0:WEND
MENU OFF:MENU 1,0,0
IF mitem=5 THEN NewForm
IF mitem<>0 THEN Replay
inote=MOUSE(1)*2+100
ilen=MOUSE(2)/10
GOTO Replay
END

' Sub Routines

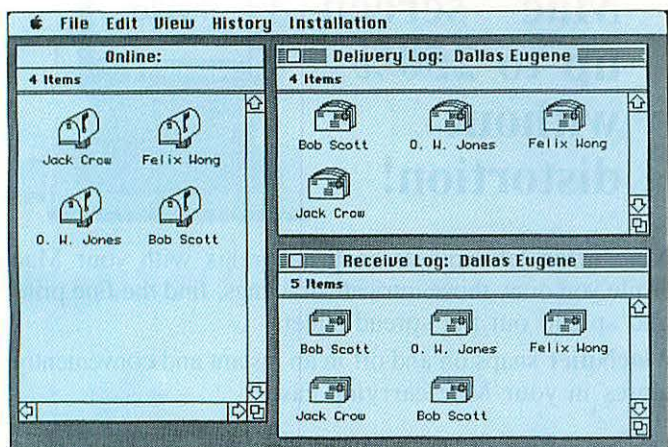
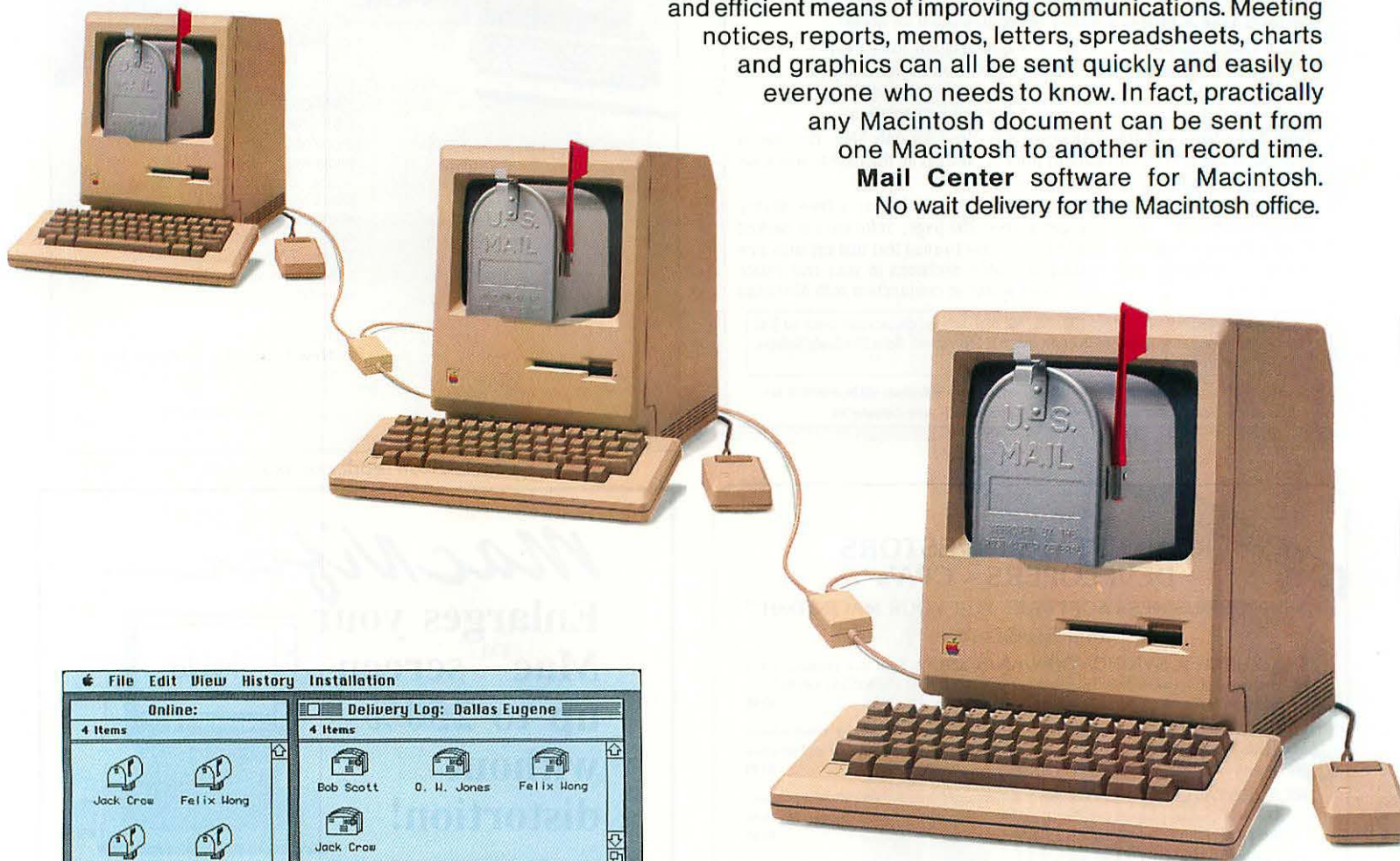
(continues on page 150)
```



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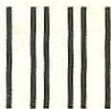
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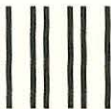
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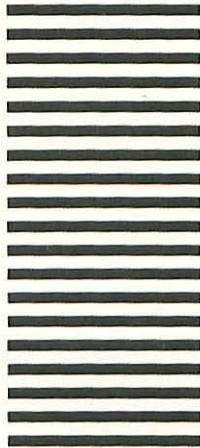
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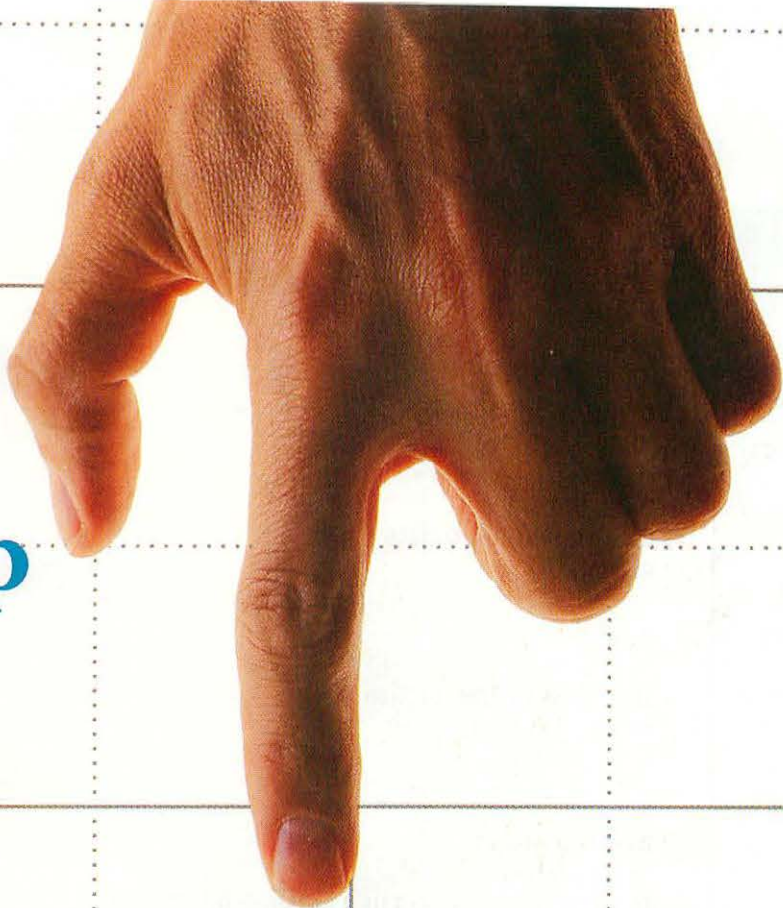
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**MACWORLD**



## Open Window

(continued from page 146)

menuini:

```
MENU 1,0,0,"Music"
MENU 1,1,2,"Voice 1"
MENU 1,2,1,"Voice 2"
MENU 1,3,1,"Voice 3"
MENU 1,4,1,"Voice 4"
MENU 1,5,1,"New Waveform"
MENU 1,6,2,"Autodraw Form"
MENU 1,7,1,"Quit"
ON MENU GOSUB doMenu:
RETURN
```

doMenu:

```
mitem=MENU(1)
IF mitem>4 THEN MAction
MENU 1,ivoice+1,1
```

```
MENU 1,mitem,2
ivoice=mitem-1
IF VoiceSet(ivoice)=0 THEN mitem=5:GOTO MAction
GOSUB ShowVoice
IF AutoDraw=0 THEN RETURN
GOSUB ClearWWindow
CALL MOVETO(0,vwave(ivoice,0))
FOR ix=rdstep TO 256 STEP rdstep
    CALL LINETO(ix,vwave(ivoice,ix))
NEXT ix
RETURN
```

MAction:

```
IF mitem=7 THEN END
IF mitem=6 THEN TogAuto
CLS
' reset array
FOR i=0 TO 256
    nwave(i)=0
NEXT i
RETURN
```

TogAuto:

```
AutoDraw=1-AutoDraw
MENU 1,6,AutoDraw+1
mitem=0' no other action
RETURN
```

ClearWWindow:

```
LINE (0,0)-(256,256),30,bf
LINE (0,0)-(256,256),,b
LINE(0,128)-(256,128)
LINE(128,120)-(128,136)
RETURN
```

ShowVoice:

```
LOCATE 2,40
PRINT "Voice";ivoice+1
RETURN
```

ShowFreq:

```
LOCATE 13,35
PRINT inote;"cycles per second (Hz)"
LOCATE 14,35
PRINT ilen/18.2;"seconds"
RETURN
```

DrawHelp:

```
LOCATE 5,35
PRINT "Slowly draw a waveform in"
LOCATE 6,35
PRINT "the box to the left."
LOCATE 8,35
PRINT "Wait for the voice to sound."
RETURN
```

SoundHelp:

```
LOCATE 4,35
PRINT "Use the Music menu to change"
LOCATE 5,35
PRINT "voices or clear the current voice."
LOCATE 7,35
PRINT "Click in this window for sound."
LOCATE 8,35
PRINT "The further left you click,"
LOCATE 9,35
PRINT "the lower the pitch."
LOCATE 10,35
PRINT "The higher you click, the"
LOCATE 11,35
PRINT "shorter the duration of the pitch."
RETURN
```



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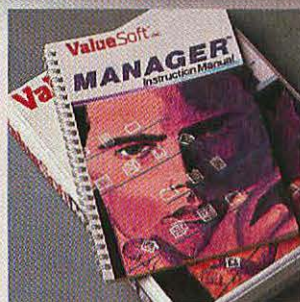
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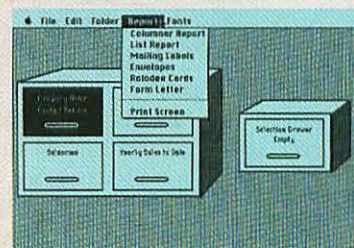
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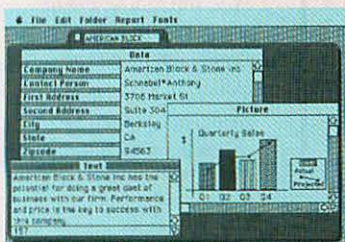
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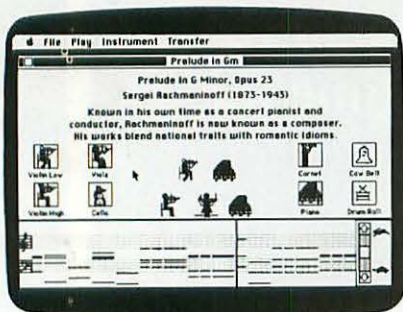


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(continued from page 144)

in the middle of a line, you have to click the mouse button, choose Italic from the Style menu, reposition the pointer where you want to place the italicized word, and type it, hoping that the word is only a few dots above or below the baseline of the rest of the text. You then have to repeat this hit-or-miss procedure to return to plain text after the italicized word. Or do you?

In a recent talk, Bill Atkinson offered two simple solutions to the problem of lining up text in *MacPaint*. One method is to activate the Grid by selecting Grid from the Goodies menu. The Grid causes the pointer to move along an invisible grid of 8- by 8-dot squares. Using the Grid makes it easy to line up text on the baseline, but the 8-dot jumps can cause uneven spacing between words.

A better method makes use of the Enter key. You type a section of text in a particular font and style, then press the Enter key (don't click the mouse button). Choose a new font, size, or style from the various menus, and continue typing. The new text has the attributes you selected and is perfectly aligned with the first text you typed. Press Enter again as many times as you like to make further changes.

*Erfert Nielson  
Oakland, California*

### Riding the Waveform

Microsoft BASIC (MBASIC) 2.0's WAVE statement lets you create your own sound waveforms, which you can hear using the SOUND statement. Unfortunately, creating a waveform is a complex task; you must create a 256-element array, fill it with the

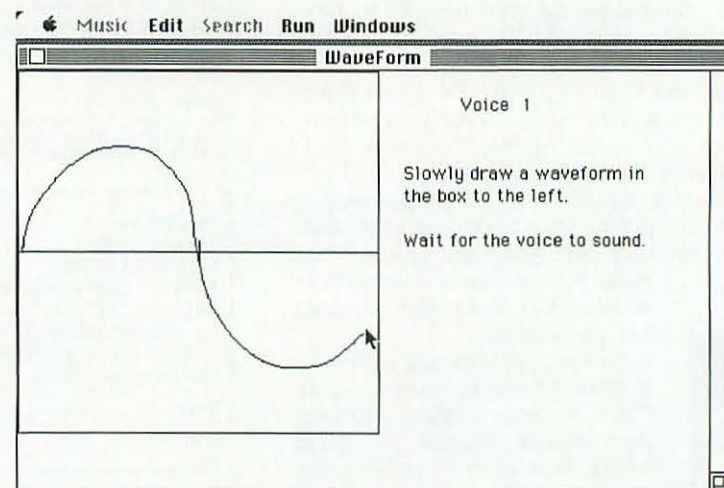
negative and positive values that correspond to the wave's shape, and then pass the array to the WAVE statement.

I've written a program called Waveform (see "Waveform Listing") that lets you use the mouse to draw and play waveforms for each of the Mac's four voices. To use Waveform start MBASIC 2.0 and carefully type the listing, saving it periodically. Next choose Run from the Program menu. If an error message (such as "Syntax Error" or "Illegal Function Call") appears, chances are you made a typing error. Proofread the listing carefully and correct any errors.

Once the program is running properly, it's easy to use. Draw a waveform in the waveform box (see "Drawing a Waveform") and wait for the sound. To hear the sound again, click the mouse button anywhere in the output window. The tone's frequency and duration are determined by the mouse pointer's position; the further left you click, the lower the sound's pitch; the higher you click (that is, the closer to the menu bar), the shorter the tone's duration.

To clear the current voice's waveform, choose New Waveform from the Music menu (see "Music Menu"). To switch to a different voice, choose the voice's number. If you choose a voice without a waveform, the program asks you to draw one. If the voice has a waveform and if the Autodraw Form command is checked, the waveform of the voice is drawn, and a tone sounds. If Autodraw Form is not checked, the new wave is not drawn before it's played, letting you change and compare voices quickly.

*Michael Blake  
Stanford, California*



### Drawing a Waveform

To draw a waveform, drag the mouse pointer through the waveform box. The closer the waveform peaks come to the top and bottom of the window, the louder the resulting tone is. Smooth arcs, such as those shown here, form a sine wave, which produces a smooth sound.



# Only you and your mouse can defend your city and save its people.



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**5:35 a.m.**

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**9:08 a.m.**

**Smart bombs come hurtling through the air...** You fire and miss, fire and miss. What's happening?! You've never seen anything like them... how do you destroy them before they destroy you? OH, NO! You're losing your high-energy shield!

**11:23 a.m.**

**Armed paratroopers are dropping from the skies in droves.** You begin to realize that defending your city is no easy mission. You fire from one of your three MacCommand bases. ZapZapZap! Got one, got two... But, they're coming too fast. Paratroopers have penetrated your city...

**4:52 p.m.**

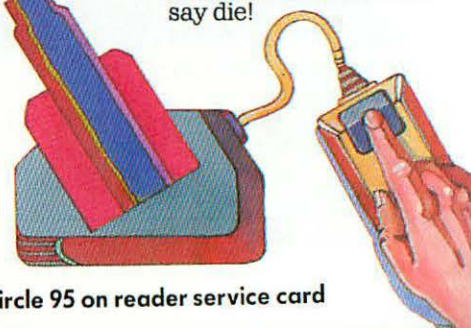
**They've destroyed your main missile base. They've detonated city hall!** Ambulances are on their way to collect your wounded. What a disaster!

But there's more to come...

**9:47 p.m.**

**NOT THE DREADED SPINNERS!** With spinners zinging through the air, firing smart bombs randomly in rapid succession, how much longer can you hold the enemy back?

To find out, you'll have to get your own copy of MacCommand. And don't worry... if you don't make the high scoreboard your first time around, there's always tomorrow. Remember, dedicated MacCommandos never say die!



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## Open Window

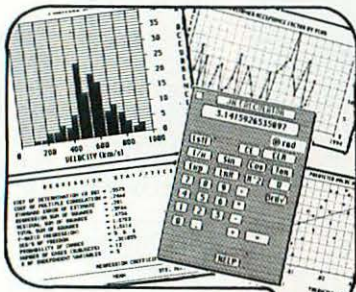
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### Some Words on Word

After using *Microsoft Word* for some time, I have a few comments that I'd like to pass on to *Macworld's* readers.

**Converting MacWrite documents.** *Word* translates formatted *MacWrite* documents well. The names of *MacWrite* documents even appear in *Word's* mini-Finder when you choose the Open command. Once converted, a *MacWrite* document appears in a new, untitled window, meaning that the original document remains unchanged.

I have noticed one quirk. A converted document's left indent is set at  $\frac{1}{8}$  inch, or .3 centimeter if your preferences are set to metric, rather than at 0, *Word's* usual setting. To change the indent, select the entire document, choose *Formats* from the *Paragraph* menu, and change the left indent setting to 0.

**Page numbering.** If you use *Auto Page Numbering* from the *Division Layout* dialog box, the page numbers always appear in 12-point New York (or 12-point Geneva if you remove the New York font from the system disk), regardless of the font used in the rest of the document. If you want page numbers in any other font, size, or style, use a running head with an embedded page number, as explained on page 163 of the *Word* manual.

**Paragraph formatting.** A problem exists with the way *Word* handles documents that contain different paragraph formats. Say a document begins with one single-spaced paragraph and changes to double

spacing in the second paragraph. If you delete the carriage return—the ¶ symbol if the *Show ¶* command is active—the formatting of the second paragraph changes to single spacing. This unintended format change is alarming when it happens unannounced. Fortunately, the *Undo* command restores the paragraph formatting to its previous state.

Joseph Samuels  
London, Ontario  
Canada

*Microsoft's Jeff Harbers explains that once converted to Word, MacWrite documents have a 1/8-inch left indent, since that is the value preset on MacWrite's rulers. To change an entire document's left indent to 0, first select the entire document by moving the pointer to the selection bar (the screen area to the left of the text), holding the ⌘ key, and clicking the mouse. Next choose Formats from the Paragraph menu, type 0 in the Left Indent box, and press Return.*

*The paragraph reformatting problem is not a bug but a side effect of the method Word uses to format paragraphs. Interestingly, the solution is described in the documentation for the IBM PC version of Word: "The formatting for a paragraph is stored in the paragraph mark. When you delete a paragraph mark, the text is joined to the following paragraph and receives the formatting stored in the remaining paragraph mark. To restore the... formatting, first choose Undo. If Undo doesn't [work], insert a new paragraph mark [by pressing Return], then format the paragraph as you want it."*  
—Ed.

### Music

- ✓Voice 1
- Voice 2
- Voice 3
- Voice 4
- New Waveform
- ✓Autodraw Form
- Quit

#### Music Menu

The *Waveform* program's *Music* menu lets you switch voices and control the program. The *New Waveform* command clears the current waveform, allowing you to draw a new one.

Perhaps you've come up with a nifty routine, gained some insight into how the Mac or an application program works, or even written a short program that performs a useful function or creates an interesting diversion. Tell us about it, and we'll pass your discovery along. We'll also pay \$25 to \$100 for each Open Window item published. Please send your Macintosh discoveries on disk (which we'll return) with your name and address on the label, as well as a paper copy, to Open Window, *Macworld*, 555 De Haro St., San Francisco, CA 94107, or electronically to CompuServe 70370, 702 or The Source BCW440. □



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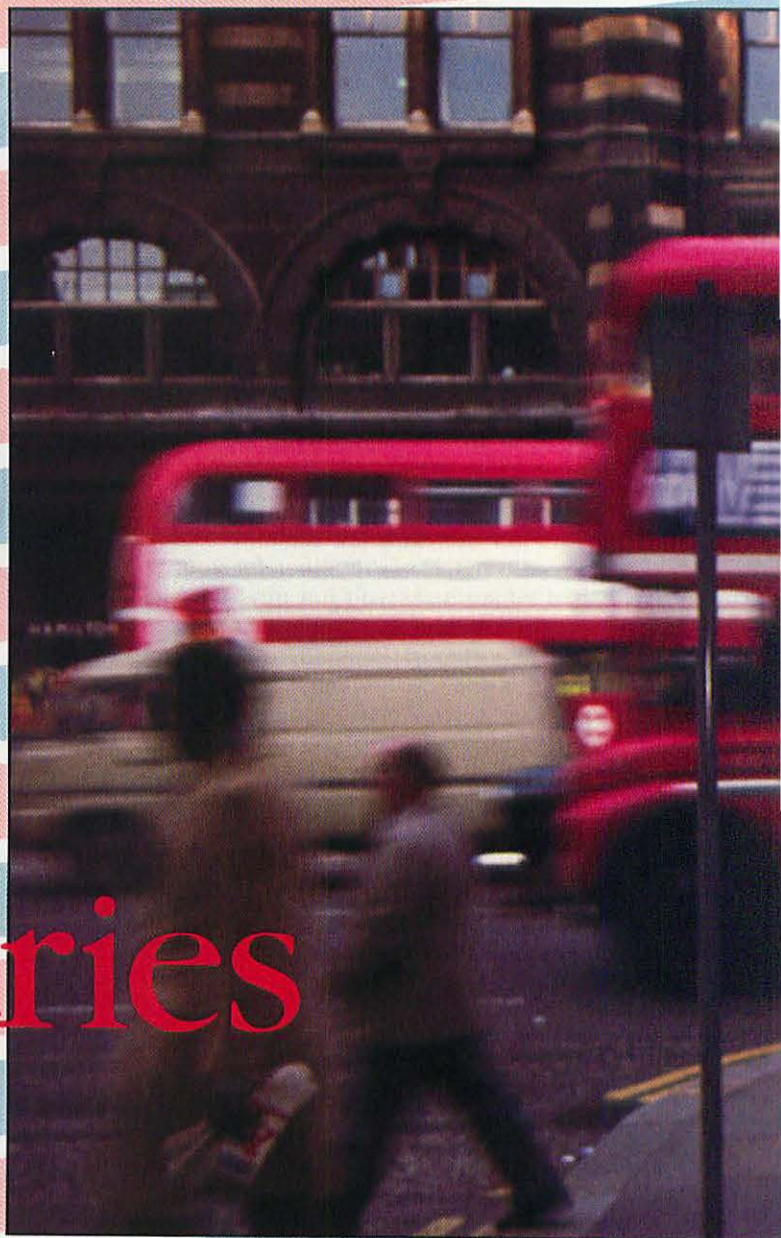
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# A Tale of Two Countries



**Jeffrey S. Young**

*It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair. . . .*

*Charles Dickens, A Tale of Two Cities*





It was the French Revolution that Sidney Carton set out for on the Dover Road from London in Dickens's novel, but in Apple's eyes Dickens may as well have been describing the summer of 1985 as the computer company tries to conquer both sides of the English Channel. However, as numerous would-be emperors and warlords have discovered over the centuries, the 27-mile-wide channel might as well be a chasm. It separates two distinct cultures—no less so in terms of personal computers.

On a recent journey to England and France, *Macworld* Contributing Editor Jeffrey S. Young discovered striking differences in each country's acceptance and awareness of the Macintosh. France is the third largest Mac market after the United States and Canada, while

across the channel sales of the machine have been below Apple's projections. And that's ironic because Britain is an enthusiastic, computer-conscious market, with more home computers per capita than France.

The reasons for how differently the Mac has been received are diverse and may have as much to do with each country's unique temperament and national character as with the structure of its computer market. Like Dickens's protagonist, Young encountered the unexpected in his travels—though nothing quite so unexpected as losing his head on the guillotine, as Mr. Carton did. His report follows.





In London's financial district a major British Apple dealer, Personal Computer Limited, has opened a shop devoted solely to the Mac. Called The Macintosh Centre, the shop occupies a sliver of a corner along one of the busiest streets in the City.

Apple's commitment to making the Macintosh international was brought home to me a few days before I left for Europe, when I received a hefty three-ring binder from Apple's head of international marketing, Bud Coligan. It contained a set of Macintosh System disks with labels stamped in bold, red ink: *German, French, Spanish, Italian, and British*. Accompanying the disks was a special "localizer" program that enables any program's menus, commands, dialog boxes, alert messages, and display of dates and times to be changed quickly and easily into another language. The binder also included translations of important Macintosh terms; for instance, the Clipboard is *Portapapeles* in Spanish, *Appunti* in Italian, *Zwischenspeicher* in German, and *Presse-papiers* in French.

Judging by the plethora of programs I saw in computer stores in England and France, as well as by ads for American Macintosh software that elbow each other for room in the numerous indigenous computer magazines, European markets have not been overlooked by major United States software houses. Probably the most striking aspect of the Macintosh community is how truly international it has become. Also impressive to me is how quickly American software shows up on the other side of the Atlantic.

### The Mac in London

I expected to be able to wow those Brits and Gauls with my assortment of Mac software. But I knew I was in for a shock when I met with Peter Trindler of the English Apple Users Group. Over a lunch of excellent beer and slender, stale sandwiches, I told Trindler that I was using a prerelease version of the disk-based *MacWrite* and how I encountered a bug that caused a file I was working on to freeze up. I figured he would be impressed that I was using a program that was just making its appearance in America. I was wrong.

"Oh yes," he exclaimed breezily. "Well, there's already an update to take care of that bug. Would you like a copy? Rather frustrating, wasn't it?"

### British Software Sagas

While the British Museum is planning on using the Macintosh for its Halley's Comet exhibitions, most of the software developers I met seemed bent on more practical pursuits. *Omnis*, a database long available in the United States, is probably the best-known British software for the Mac. I saw versions of database, accounting, and project management programs under development, as well as a plotter-driver program called *MacPlot*, which translates *MacDraw* data for a variety of color plotters.

Perhaps the most intriguing product is being written by a small company in Leicester, the former garment manufacturing center located 2 hours north of London. With what might be considered foolhardy bravado or David-against-Goliath guts, an Apple dealer and his programmer partner have taken on a difficult challenge. Regardless of the fact that Apple's *MacWrite* and *Microsoft Word* dominate the market, Mike Glover and Keith Lander of Icon Technology are developing their own word processing program, *MacAuthor*.

"Keith's writing code as fast as he can," laughed Glover over an elegant dinner in a tiny English village near his home. "And while you may not think of Leicester as a computer center, don't underestimate us. We're not exactly amateurs you know."

I knew. Glover, who owns the biggest retail Apple dealership in those parts, wrote the code for and markets a best-selling mail-merge program (*mail-shot* program in British vernacular) for the Apple II. And Lander has written a version of FORTH, as well as much of the code used to operate the *Queen Elizabeth II* on its ocean voyages. But can two fellows in Leicester bring their product to market and compete with *MacWrite* and *Word*?

### Inside Apple-U.K.

"Only time will tell" was how David Hancock, Apple-U.K.'s managing director, described the future for the Macintosh in the United Kingdom. "There's no doubt about it. We have a tough battle before us. But, on the other hand, the U.K. market is the largest in the world after the United States—so we've come up with some different marketing concepts."

A former Gillette-U.K. marketing manager who's been with Apple less than a year, Hancock has brought in new managers and shaken up Apple-U.K., not to mention the British computer business, with some of the most aggressive (or desperate, depending on your viewpoint) campaigns yet seen.

"We were all sitting around one day, trying to come up with ways to improve our market share, when somebody made the point that the first thing anyone who buys a Mac does is to show it to all their mates. Something clicked in my head, and our 'Introduce a Colleague to the Mac' campaign was born.

"The idea is to reward early buyers with carrying cases, software, and even upgrades to 512K in return for sending Mac buyers to Apple dealers. It's great for everyone," Hancock said. "The buyers get something from Apple, and the dealers get new customers. So far the response has been fantastic."

In addition, Apple-U.K. has expanded the "Test-Drive a Mac" program in a range of interesting ways. First, it added test drives built around individual programs rather than the potpourri of applications of-





*A chill wind blows for the Macintosh in Britain, but Apple-U.K. managing director David Hancock hopes for clear skies ahead. He is spearheading an aggressive marketing campaign, offering tailor-made test drives, that has raised eyebrows in the usually staid British personal computer market.*

ferred in the American marketing effort. With its approach, Apple-U.K. believes that a prospective buyer could see how a particular accounting program, for example, helps in business. The company also has plans for corporate test drives, with dozens of machines delivered to company offices, and test drives tailored to specific professionals, such as architects or doctors.

If the British don't buy the Mac, it won't be for a lack of Apple's effort. Maybe the machine just doesn't appeal to a nation used to low-cost Sinclairs and government-subsidized Acorns. But what about IBM's success in that market?

"You know what that is?" asked Hancock rhetorically. "To us, with Thatcher as prime minister and after ten years of conservative government, IBM is an example of what's good about American business—stable, solid, unsurprising. Apple's trying to chip away at IBM's lead, but we've still got a long way to go."

### **Le Macintosh**

Across the channel *le Macintosh* has caught the fancy of the French in ways both whimsical and creative. While there's some talk of the corporate market, the French seem to have taken to the Mac primarily as

a personal computer. Composers, TV personalities, fashion designers, and the country's leading romance novelist are among those who have Macs perched on their desk tops. It's chic to have *le Mac*.

And it's not just at the Cafe de la Paix or along rue de Faubourg St. Honore where you hear talk of *le Mac*. Out in a Parisian suburb, across from a baker and next door to a mechanic, sits a shop whose facade has been remade into a giant Mac, complete with a disk slot and a picture window as the screen. At night, a revolving slide show of Macintosh screens is projected onto the glass. *Vive le Fat Mac!*

Sales figures seem to bear out the love affair the French are having with the Mac. Apple-France claims to have sold more than 3000 Macintoshes in December 1984. By the end of the year, nearly 20,000 machines had been sold in France since the Mac was introduced in Europe in May. Major American software is already available in French versions.

But more than a shopkeeper's playful imagination has made the Mac a success in France. Marketing a personal computer overseas requires a major commitment on the part of the manufacturer. The software and the keyboard have to be localized for the peculiarities of each nation. Native staff has to be hired, a distribution network has to be built, and a position in the marketplace has to be staked out. Of the American computer firms to have reached British shores, only Apple and IBM have had enough clout to swim across



*On your next trip to Paris, when you've had enough of the Louvre, visit the fattest Mac in France. At night a revolving slide show projects Macintosh screen shots on the store's front window.*



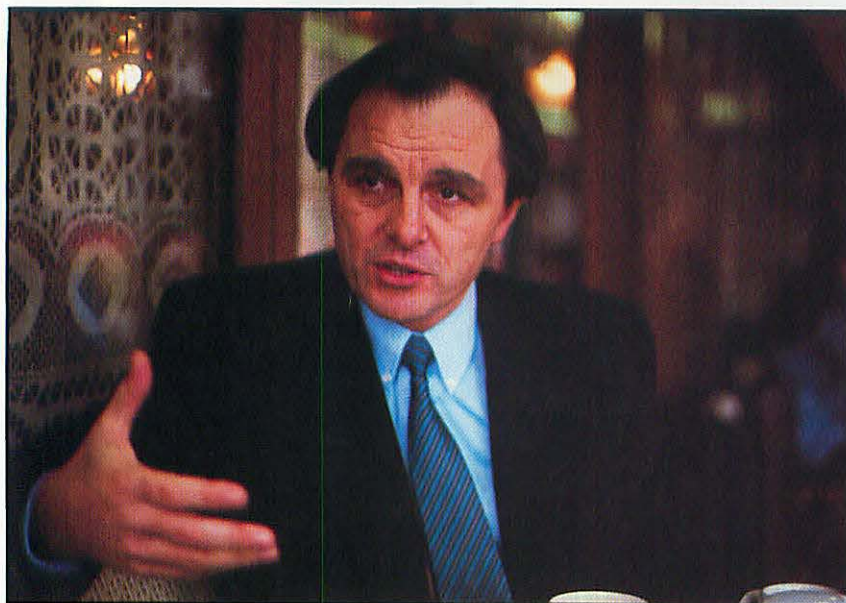
the channel. Honeywell-Bulle, a French subsidiary, also markets a personal computer, but without the number of machines that either IBM or Apple can deliver; software development has lagged.

In winning over the French, Apple is way ahead of IBM for reasons that have as much to do with emotion and history as with the availability of software. "Ask a Frenchman where IBM is headquartered," explains Henri Aebischer, a marketing manager for Apple in Europe, "and no one knows. But everyone knows that Apple is in 'Seelecon Vallee.' And Steve Jobs is a hero in this country. Everyone knows the story of Apple starting in a garage. It's like a myth, and the French love the underdog anyway. And IBM—well, it's too much like American capitalist imperialism for us. Remember, our government is a form of socialism.

"Then we have our own Steve Jobs in Jean-Louis Gassée."

### The French Jobs

Gassée, who is head of Apple's French subsidiary known as Seedrin, is a combination intellectual, philosopher, and businessman. We met at a cafe in the



*The French have opened their arms to the Macintosh according to Jean-Louis Gassée, head of Seedrin, Apple's subsidiary in France. "The Mac smells of infinity," he enthuses infectious. "It's a magic carpet for the mind." High-tech philosophizing aside, sales figures bear him out.*

shadow of the Sorbonne, where he immediately lived up to his reputation as a spokesperson for high tech and as a charismatic representative of Apple—a slightly older incarnation of the spirit embodied by Jobs.

"The Mac smells of infinity," he exclaimed, letting his hands do part of the talking as he warmed to his subject and audience. "It's a magic carpet for the mind."

Gassée continued, "Our revenues for 1984 were 939.8 million francs." At current exchange rates that's something in the region of \$90 million dropped into Apple's corporate coffers. "We sold 70,114 computers [29 percent Macs and the remainder Apple IIs] in total. That's a 150 percent increase over the previous year." He smiled.

"Obviously the French market exhibits more strength than was expected," he added. "In my modest opinion we've done something very effective here in France. We've refused to differentiate between business and home computers."

By then Gassée was revved up. Explaining the Mac's relative lack of success in Britain, he cited the cluttered market, government subsidies for the British Broadcasting Corporation's Acorn computer, the charisma of Clive Sinclair and the inexpensive computer that bears his name, and the lack of a nationwide chain of retail stores.

"Sixty percent of our sales comes from FNAC [*Fédération Nationale d'Achat des Cadres*]," he continued, describing the enormous chain of government-financed retail *supermarchés*. "We've been able to put complete Apple-only ministores inside these big stores, and the response has been fantastic. There's nothing like that in England—maybe for clothes, but not for electronics."

Apple and Gassée have not been totally successful in marketing the Mac, however. A computer literacy program destined to place more than 120,000 computers in schools throughout the country has passed up the Mac for French-made computers. Jean-Jacques Servan-Schreiber, a well-known writer, philosopher, and technophile, resigned his position as head of the Paris-based World Center for Computer Science and Human Resources in protest of the French government's rejection of the Mac. Servan-Schreiber maintains that the French computers are technologically inferior to the Mac.

### Software à la France

One of the best known French Macintosh products, *CX-Macbase*, is distributed in the United States by Hayden Software under the name *Ensemble*. Another database program, *ABCbase*, is being developed by ACI (*Analyses Conseils Informations*), a small company in Paris.



You couldn't ask for a more Parisian setting than the ACI offices, where I pushed open a 20-foot-high wooden door that faced the street, walked down a passageway into a central courtyard, and finally went through another set of towering doors into a warren of high-ceilinged, plaster-filigreed, finely decorated offices. Having just come from Apple's Paris headquarters, a modern, six-story, glass and chrome building shoehorned into a block of older houses, I felt like I had walked back in time.

ACI began when Marylene Delbourg Delphis, a philosophy student, was asked to compile a history of the French perfume industry. The project quickly developed into a multiprojector slide show and database run by an Apple II, programmed by a whiz kid named Laurent Ribardi re. That program was the precursor of *ABCbase*, which was released late last year.

"We had more than 6000 slides and perfumes to coordinate for the history project," Delphis explained. "As soon as we saw the Mac—poof! that was it. Laurent went to work immediately. We used the perfume data

to test the new program." Delphis and Ribardi re set up the perfume database on the Mac and started the program. Images slipped onto the screen like slides, detailing the rise of the industry.

The programmer, who spoke no English and had reached the grand old age of 20, was obviously chafing at the bit to show me something else. Finally he dragged me into another overwhelming room with several Macintoshes spread over the desks and a Sony video monitor and laser disk player presiding over the whole arrangement. With a flourish Ribardi re turned on the equipment, inserted a pair of Mac disks and a laser disk in the player, and pointed to the monitor.

Delphis suggested, "Ask for any artist by name." For no particular reason, I entered *Raphael* in the field box on screen and pressed Return. The laser disk whirled, as did the Mac's disk drives, and in a moment one of Raphael's masterpieces appeared on the video monitor. The Mac displayed a screen full of information on Raphael's life and how the work shown on the monitor fit into his oeuvre.

"The laser disk is from your National Gallery in Washington. We tied it to the Macintosh with *ABCbase*, and you've got the first interactive laser disk-Macintosh database. For a researcher or in a library it could be very useful, no?"

#### IRCAM

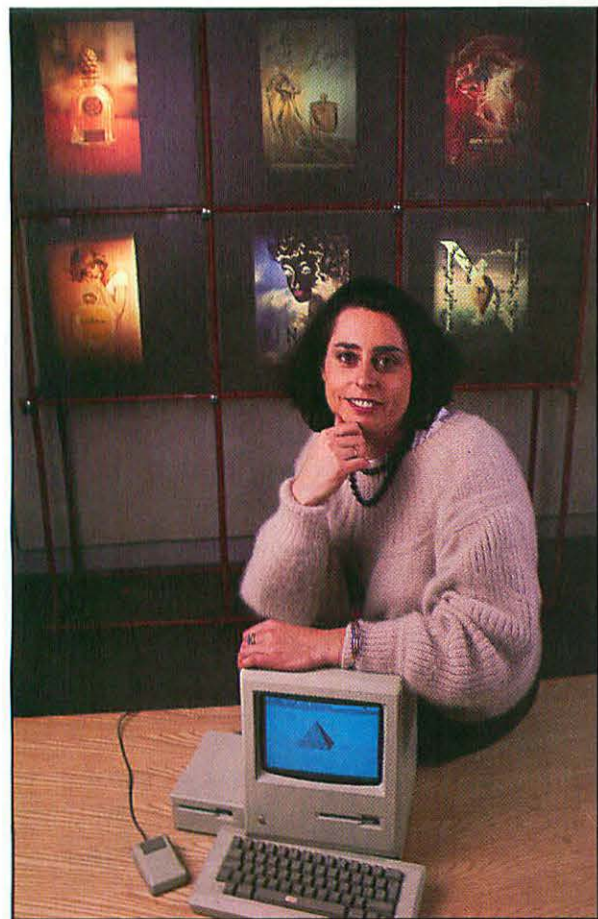
Next door to the Pompidou Center across town is another place where the French are using the Macintosh to push the limits of the interaction between art and computers. IRCAM (*Institut de Recherche et Coordination Acoustique/Musique*) is the most sophisticated modern music research and production facility in the world. The institute draws composers like Stockhausen and Xenakis to its space-age performance and recording chambers.

Jean-Baptiste Barri re, a wild-haired musician who runs the day-to-day operation of the 24-hour-a-day institute, explained how the Mac fits into its plans. "We want to extend our ideas and transfer our knowledge," he said. "Using a machine as simple to operate as the Macintosh could be the way to draw in talented people without technical backgrounds.

"But don't misunderstand," he continued. "In a major piece of music here we could have as much as 100K of computer storage memory for every second of sound. We're not going to be composing on Macs but using them as the way into our mainframe VAX. What we want is an interactive, interpretive interface like the Mac's to get inside our advanced synthesizer programs."



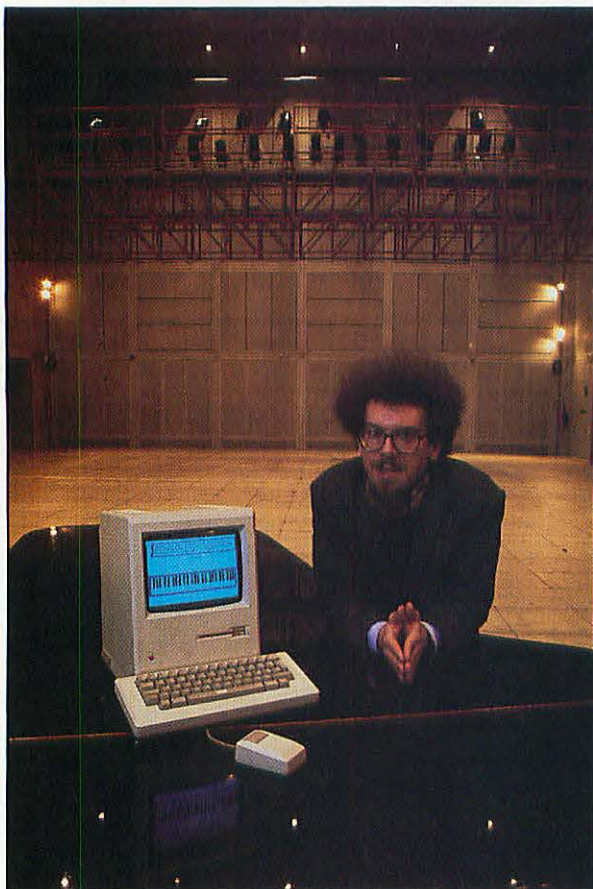
*Best-selling romance novelist Irene Frain is representative of French writers, composers, designers, and other artists who are making the Mac de rigueur in personal computing.*



*When Marylene Delbourg Delphis began writing a history of the French perfume industry, she didn't expect it to evolve into a Mac database program, *ABCbase*.*



Controlling the acoustics of a recording studio or a performance hall is one of the ways the Macintosh will be used at IRCAM, the French institute for advanced music research and recording, according to administrator and musician Jean-Baptiste Barrière.



In Barrière's vision, modern music is an engineer's as well as an artist's medium. A walk through the composing studios was like a tour of the Johnson Space Center, with computers and mixing boards that took up whole rooms. Cables ran everywhere. Isolation chambers with yellow baffles and catwalks suspended in sound space gave the facility an other-worldliness. The main concert hall seemed to have come out of a *Star Wars* space opera.

"The acoustics of this room can be absolutely adjusted for each piece played here," Barrière told me. "Controlling acoustics is one of the things we're planning to do with *le Mac*."

Although the English seem less enamored of the Mac than the French, the same kind of people are attracted to the machine—creative individuals who see the Mac as a revolutionary computer. To gain a stronger foothold across the Atlantic with the Macintosh, Apple faces the same strategic problems as in America: how to convince the more conservative corporations and small businesses that the Mac is leading a trend that will change the face of computing as inexorably as the French Revolution changed Europe. Judging by the response so far, it is a season of hope for Apple. □

Jeffrey S. Young is a Contributing Editor of Macworld.

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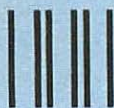
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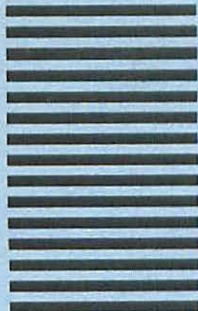
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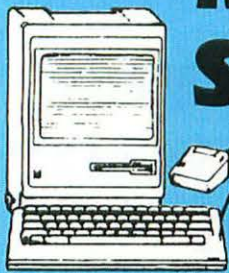
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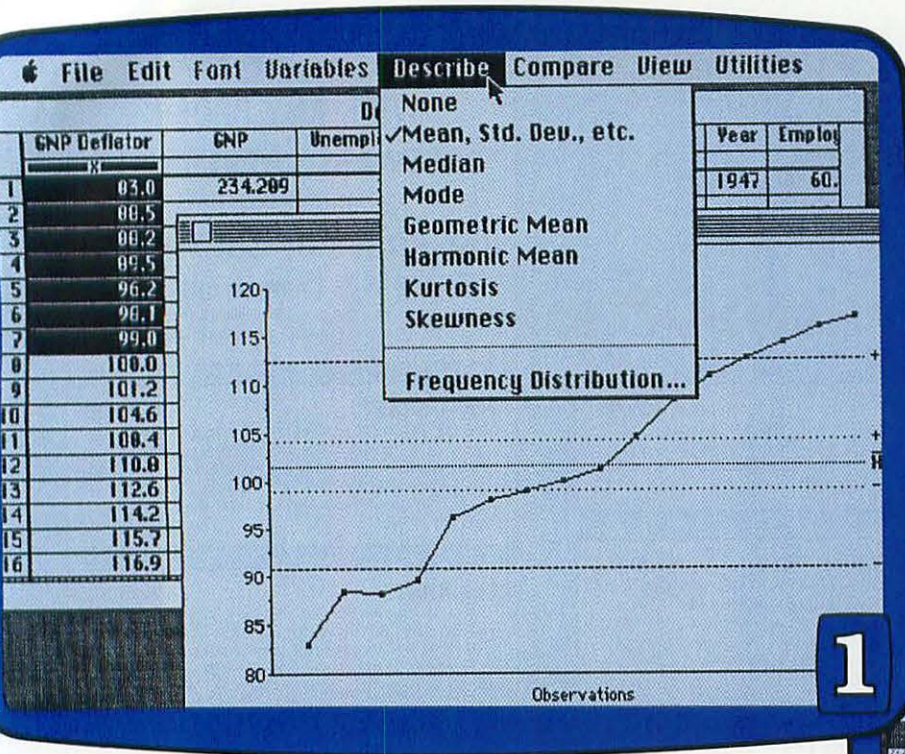
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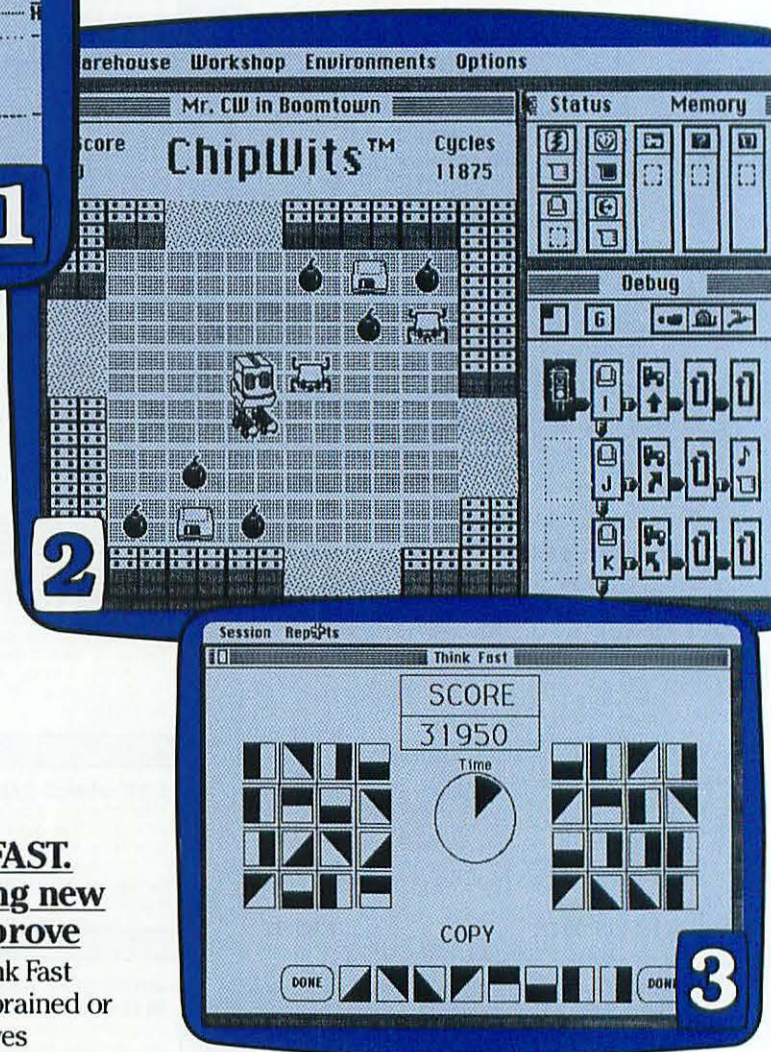
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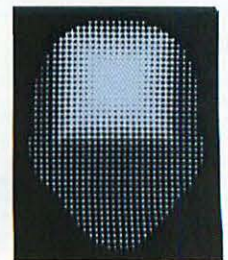


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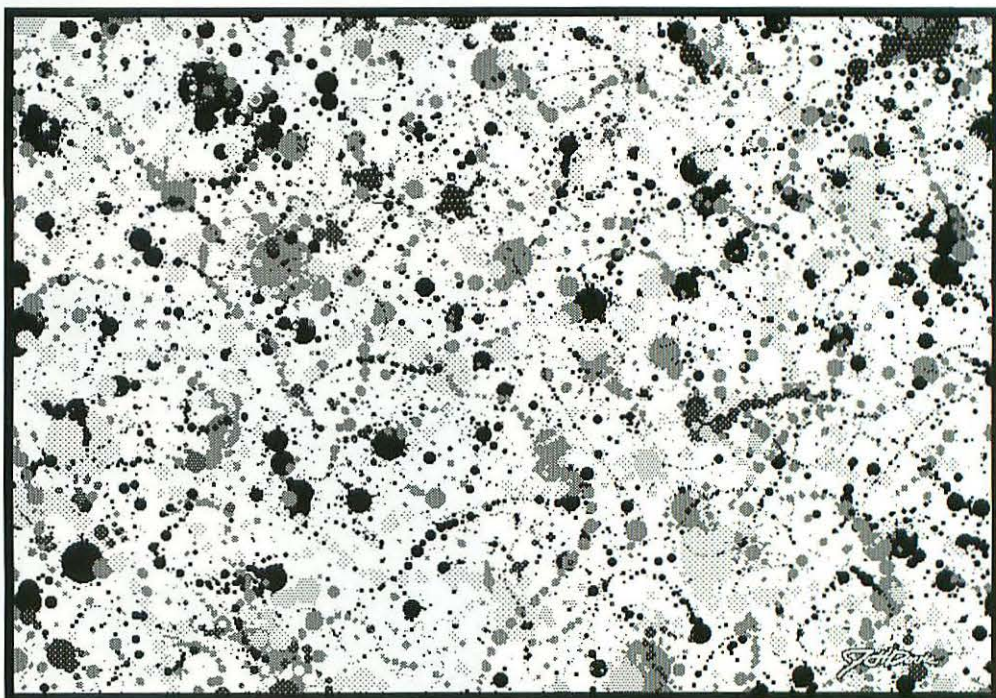


# Macworld Gallery

*An exhibition of Macintosh graphics*

**Edited by Erfert Nielson**

Each month Macworld Gallery displays the winners of the Macworld Art Contest, as well as several other drawings. To enter the contest, send a paper copy of your artwork to Macworld Gallery, 555 De Haro St., San Francisco, CA 94107. If your drawing is selected, we will ask you to send a copy of it on disk. The drawings are viewed each month by a panel of five judges, who award one first prize of \$500 and a MacTablet graphics tablet from Summagraphics Corporation and two second prizes of \$250 each. In November 1985 a grand-prize winner (\$5000) and two runners-up (\$2500) will be chosen from among the year's winning drawings.



*Abstract 11*

## ■ \$500—First Prize

### **Abstract 11**

My goal was to create an image that would suit the computer's technical precision and yet have a natural spontaneity. I treated *MacPaint* as just that—paint. I put down several layers of "drips," one layer at a time. Each drop is an individual circle created by using the Shift key with the solid oval tool. I overlapped eight layers of "paint" to complete the piece.

*Jack Davis*

*La Mesa, California*



■ \$250—Second Prize

**Under Wrap**

The idea for this drawing came to me after I awoke from a restless sleep, entangled in my sheet and nearly suffocated. I made a model using clay and paper and sketched the basic shape with *MacPaint*'s pencil. I then used the pencil, brushes, the spray can, and FatBits to create contrasting light and dark areas.

*Stewart Cho*

*Woodcliff Lake, New Jersey*



*Under Wrap*

■ \$250—Second Prize

**Our Lady of the Flies**

I created several separate images—a fly, a boot, a hand, and an eye—which I duplicated, flipped, and incorporated into a collage. The Mac allowed me to rearrange the objects until a pleasing composition emerged.

*Thom Gillespie*

*Juneau, Alaska*



*Our Lady of the Flies*

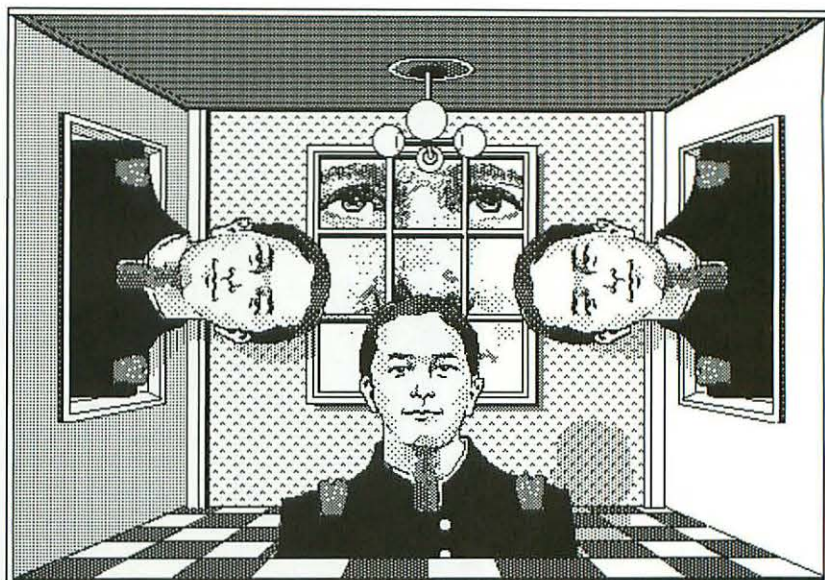


### Inward View

This drawing evolved from one of my frequent doodling sessions. I started by drawing the background face using a brush and the spray can. Then I drew the window, made a small gap in the border so the face would show through, lassoed the window, and dragged it over the face. I outlined the floor and the walls with the straight-line tool and added patterns with the paint bucket. I copied and rotated the figure of the man and pasted in the copies.

*Randy Groft*

*Lancaster, Pennsylvania*



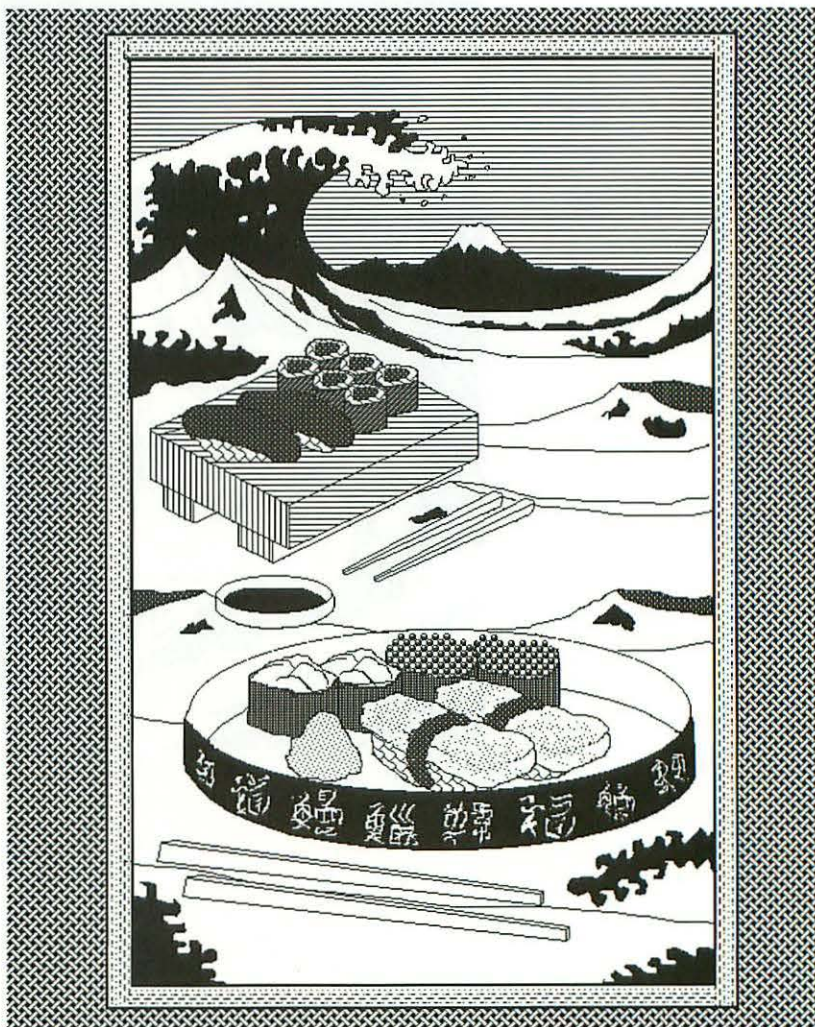
*Inward View*

### Mt. Fuji with Sushi

I began with the pieces of sushi, duplicating them and placing them together. Then I drew the serving board and tray, cut the sushi, and pasted it onto them. I created the background in a different document, then cut the trays and pasted them on top of the new background. As a final touch, I placed a frame around the entire drawing and filled it with a pattern from the paint bucket.

*Robert Schramm*

*New York, New York*



*Mt. Fuji with Sushi*

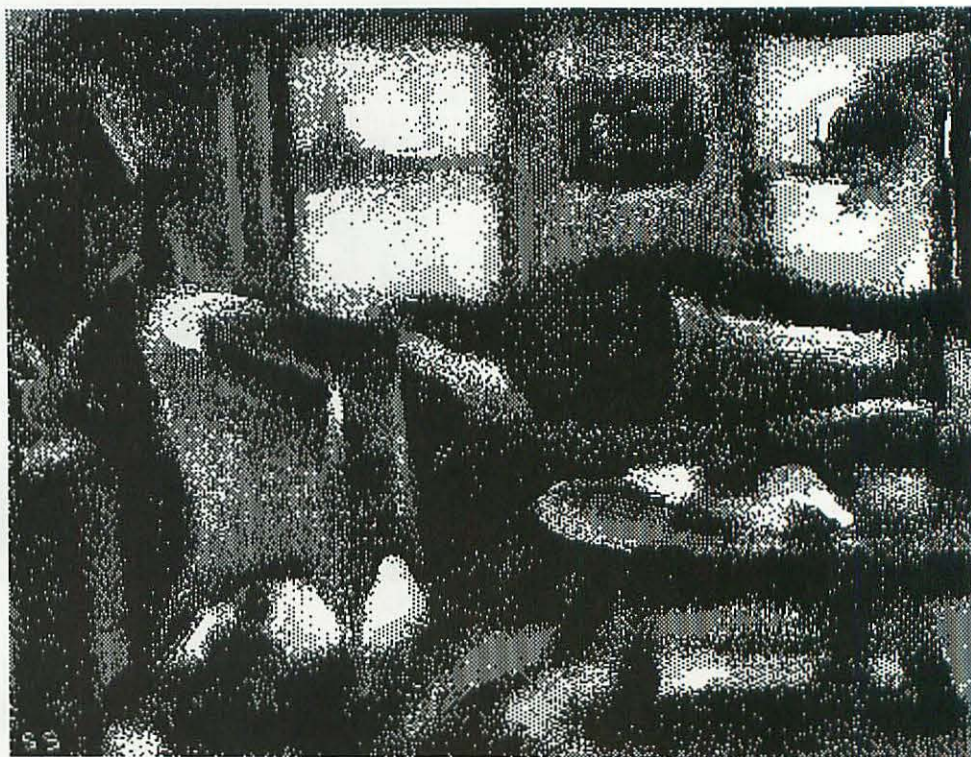


### Living Room

I used Summagraphics' Mac-Tablet and stylus to make this drawing of my living room. The principal tools I used were the spray can and the paintbrush. I don't find the Macintosh's lack of color a limitation; black and white is fine for defining areas of light and shadow.

*Sharon Steuer*

*Bethany, Connecticut*



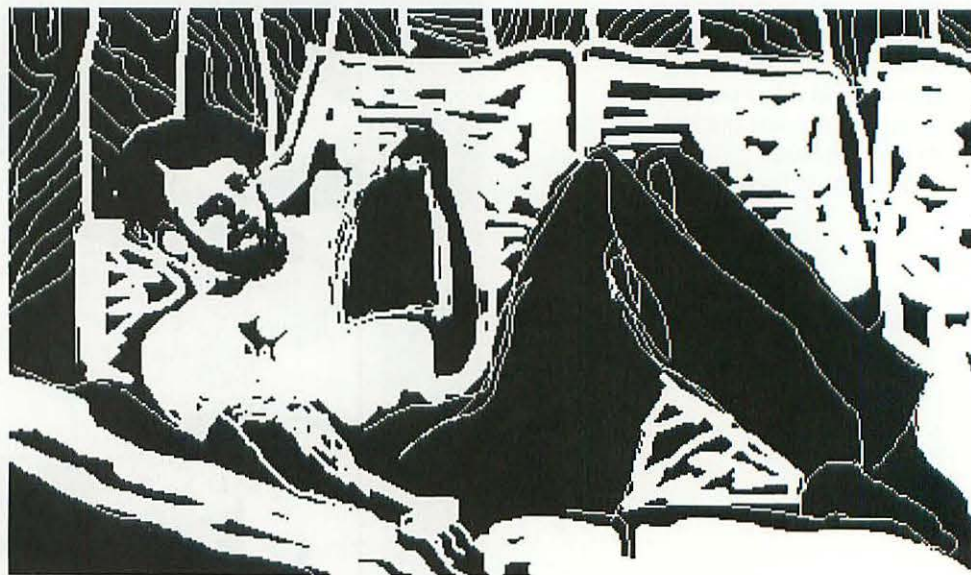
*Living Room*

### The Reader

I filled the screen with black and painted in white using various brushes. Because of the many brush shapes and sizes available, *MacPaint* lends itself to either subtle or bold renderings, depending on the artist's needs. In this picture I like the contrast of the bold lines against the thin, spidery ones.

*Cathy Sanders*

*Ponca City, Oklahoma*



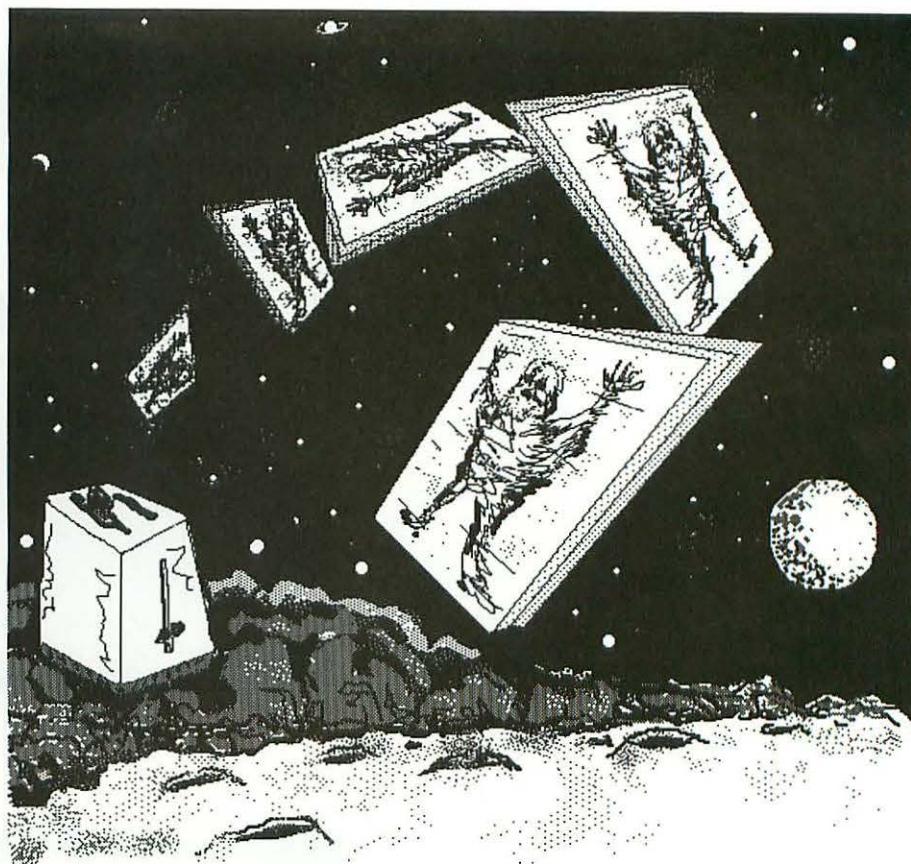
*The Reader*



### Space Toast

I started out by drawing the largest piece of toast and putting a copy in the Clipboard. I inverted or rotated the receding pieces and reduced them by pasting them into smaller and smaller selection rectangles. I filled in the background with the paint bucket and drew the stars with various brush tips.

*Michael Jay Smith  
Jacksonville, Florida*



*Space Toast*

### Tarot Queen

I used the pencil to rough out the major shapes in this drawing. Then I used a thick paintbrush to draw the outlines, the paint bucket to fill areas with patterns, and the spray can to shade in the Tarot Queen. The spray can is my favorite *MacPaint* tool; it allows you to create textures and shading instantly.

*Rudy Autio  
Missoula, Montana*



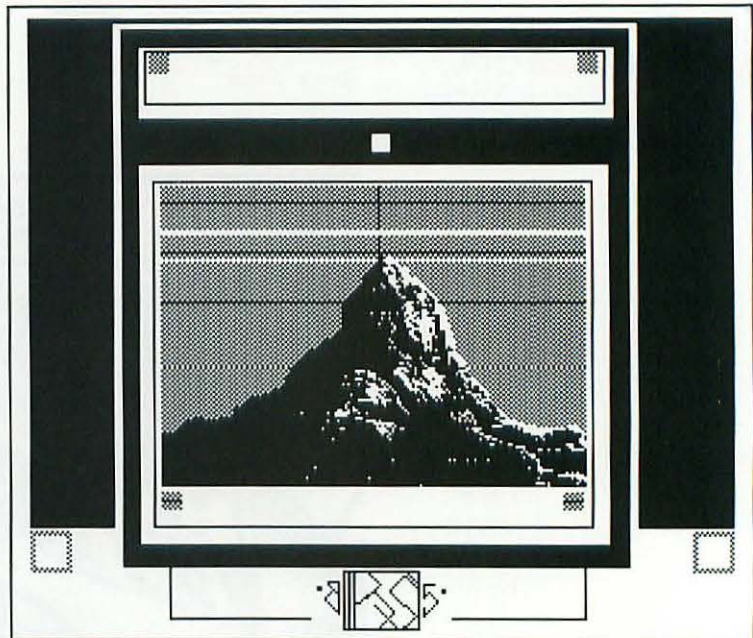
*Tarot Queen*



**In Time, in Time ...**

I drew the face on a black background using the pencil, the spray can, and a small brush. I made a copy of a mountain from one of my other compositions, shrank it, and pasted it into this drawing; I certainly couldn't have done that in any other medium. Lastly, I added the decorative squares and borders.

*Bradleigh Stockwell*  
*San Francisco, California* □



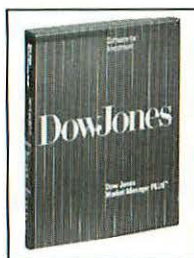
*In Time, in Time ...*





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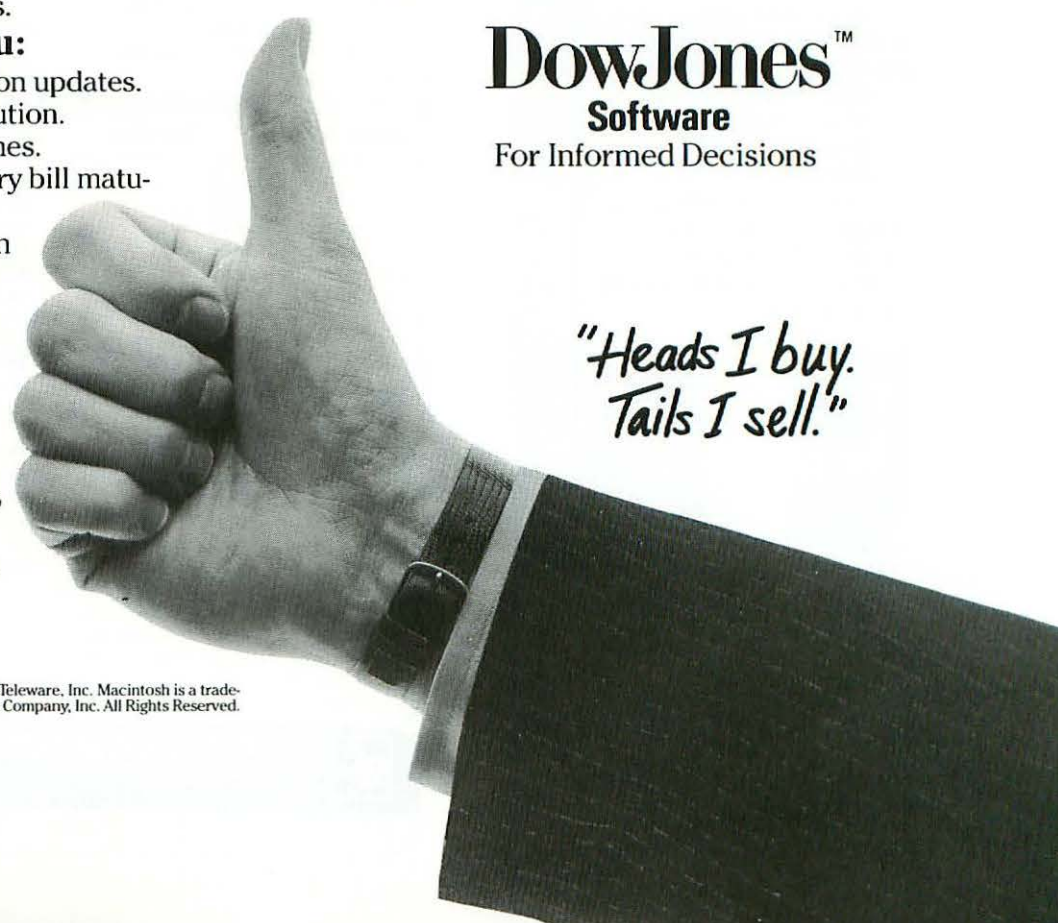
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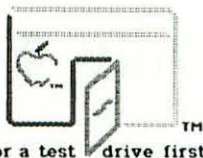
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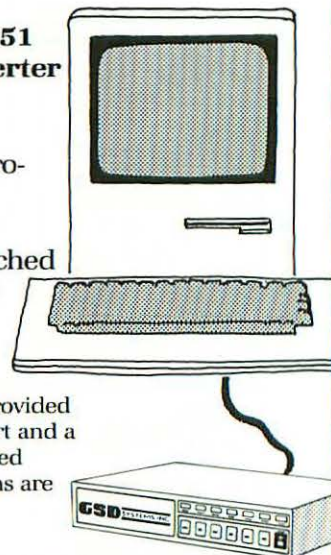
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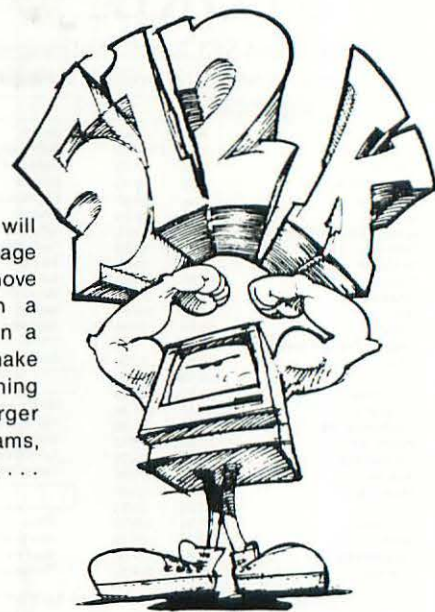
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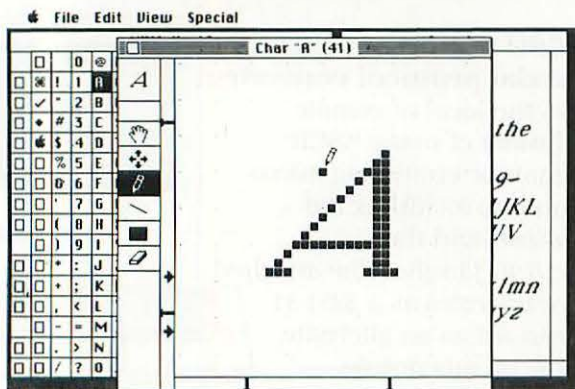
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*The Macworld Directory is a comprehensive listing, by category, of products and services available for the Apple Macintosh. It provides advertisers with a low-cost advertising alternative and our readers with an easy reference guide.*

*FORMAT: The standard format includes a product ID, a 300-character descriptive ad, and a company name, address, and telephone number.*

*Advertisers may choose among categories already in use, or they may create their own. Display advertisers can cross-reference their current ad to the Macworld Directory for increased exposure.*

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## ■ Accessories

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#### Mac Custom Cables

The Mac-Modem cables mate with the Hayes (RS232) 1200 and compati-

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MacMemory Electronics, 500 W. Middlefield Rd. #28, Mountain View, CA 94043, 415/964-4176

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### EarthBeat disk-magazine

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Omegaman Productions, P.O. Box 278, Islesboro, ME 04848  
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### Macintosh Typefaces

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Houlberg Development, P.O. Box 271075, Escondido, CA 92027

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FIND IT FAST! Encyclopedia-like digest of all Mac magazine, trade journal, newspaper, newsletter articles, vendor press releases organized by topic, w/ original reviews/editorial. Speeds getting facts you need. Learn inside tips/opinions from real users. Bimonthly, to be monthly. 1 year \$12. MC/Visa. MacBriefs™, P.O. Box 2178, Huntington Beach, CA 92647, 714/842-0518.

## ■ Software

### ○ Accounting

#### INVENTU

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Eureka Computer Systems, 1419 W. 7th Ave., P.O. Box 2308, Corsicana, TX 75110, 214/872-2501

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Mitek, 554 Beatty St., Vancouver, B.C. V6B 2L3 Canada, 604/684-0402

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T/Maker Graphics, 2115 Landings Dr., Mountain View, CA 94043, 415/962-0195

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Aurora Borealis Computer Graphics, 1033 Battery St., San Francisco, CA 94111

### ClickArt Publications

contains practical images for enhancing business communications & creating newsletters & announcements. It incl. over 200 images ranging from illustrated alphabet letters, column headings, illustrated phrases (Notice, Letters to the Editor, On Vacation), people, cartoons, borders & maps of the USA & Europe.

T/Maker, 2115 Landings Dr., Mountain View, CA 94043, 415/962-0195

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Enter Set, Inc., 410 Townsend #408B, San Francisco, CA 94107, 415/543-7644

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SoftDesign, 14145 SW 142nd Ave., Miami, FL 33186, 305/253-5521

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COPY II MAC is the backup insurance you need to protect your software investment! COPY II MAC makes a backup of most protected software quickly & easily, recovers data from damaged disks, and undeletes files. For 128K or 512K Mac, 1 or 2 drives. Also available for IBM, Apple II, Comm 64. \$39.95 + \$3 s/h (\$8 overseas). Visa/MC/Check. Central Point Software, 9700 SW Capitol Hwy #100, Portland, OR 97219, 503/244-5782

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Your data storage capacity is limited only by the size of the drive you choose. And, regardless of the size of any given file, you can back it up onto floppy disks. MacDrive will even tell you when it's time to put in a fresh floppy.

## With MacDrive's new software you can divide and conquer

Thanks to a special partitioning feature, MacDrive software lets you divide the MacDrive into separate, manageably sized volumes. For example, our 10 megabyte hard disk system can be broken up into 20 partitions. So you can set up separate categories for your correspondence, presentations, reports, spreadsheets, games and so on. This smaller-scale organization also means your Macintosh will be able to retrieve the files you want more efficiently.

## You'll be up and running in minutes

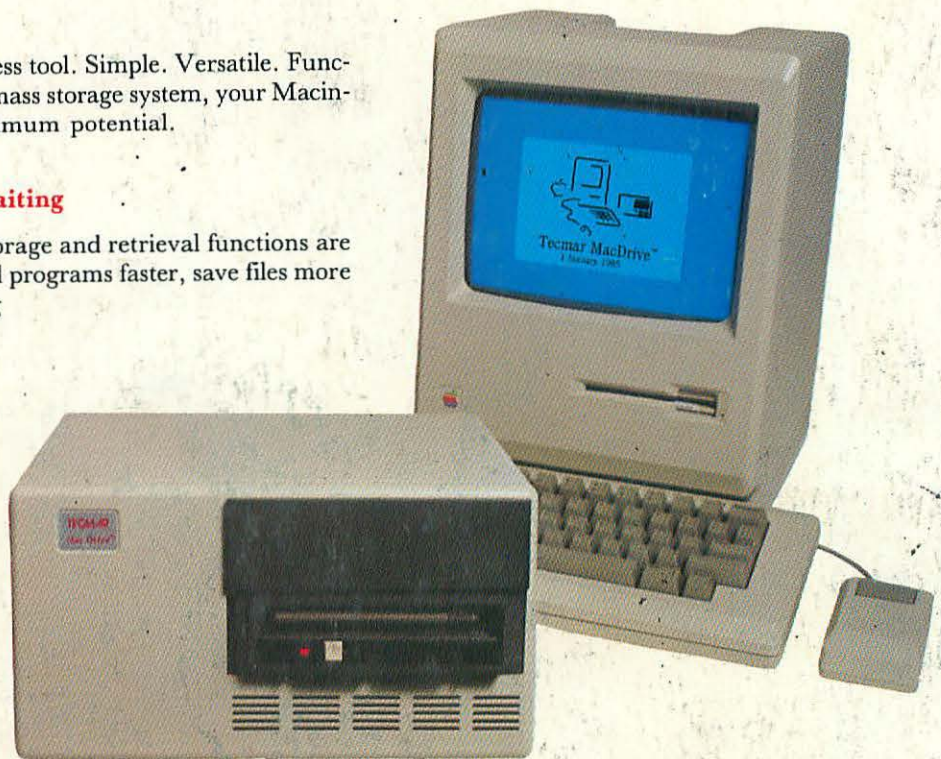
MacDrive includes all the cables and software you'll need to have the system operating in less than 10 minutes. Just plug in two cords and you're on your way. More good news: MacDrive uses your printer port and comes with its own port for a printer — leaving the modem port free for other important applications.

## You've got four great choices

MacDrive is available in four flexible configurations:

- \*10 megabyte fixed hard disk
- \* 5 megabyte removable hard disk
- \*10 megabyte fixed hard disk plus 5 megabyte removable disk
- \*Two 5 megabyte removable disks

If you'd like to see a Macintosh working to the max, stop in at your nearest Tecmar dealer for a MacDrive demonstration. To find out who that dealer is, call Tecmar at 216/349-1009.



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